The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 636.—Vol. XVII. LONDON, SATURDAY, OCTOBER 30, 1847. [Price 6d.

WHEAL FRANCO COPPER MINE.

MR. G. TRICKETT has received instructions to SELL, BY PUBLIC AUCTION, at his office, No. 18, Whimple-street, Plymouth, on Monday, 1st November, 1847, at noon, SIX SHARES in that profitable adventure, called WHEAL FRANCO, situate in the parish of BUCKLAND MONACHORUM, near Tavistock, in the county of Devon. A very large portion of orey ground is now laid open in the above mine—the average sampling being about 170 tons per month; and, from present appearances, there is every reasonable dependence on a very considerable increase, which will allow of regular dividends being made, as may be seen from the report of the captains and committee, on application at the auctioneer's office, 18, Whimple-street, where all required information may be obtained.

Dated 18, Whimple-street, Plymouth, Oct. 16, 1847. 1

MINE MATERIALS FOR SALE.—TO BE SOLD, BY PUBLIC AUCTION, without reserve, on Tuesday, the 2d of November next, at the Account-House of STRAY PARK MINES, CAMBORNE, Cornwall, at Twelve o'clock at noon, a 60-inch CYLINDER ENGINE, complete, 6-feet stroke; a BOILER, about 4 tons; and a lot of OLD SCRAP-IRON—the whole of which are now lying at Stray Park Mines, adjoining the Hayle Railway, by which the transit to the port of Hayle, or Portreath, is cheap and convenient.

Also, at the same time, will BE SOLD, without reserve, a 30-inch CYLINDER ENGINE, with 8 tons boiler, wood-work of engine-house, and first piece of main-rod—now lying at Wheal Kayle Mine, near Hayle, Cornwall. This engine is a first-rate piece of machinery, having been manufactured by Messrs. Harvey and Co., of Hayle Foundry, in 1845, and will be warranted as good, in every respect, as when it was first set to work.

For further particulars, apply to Mr. Vawdrey, Penpoll, Hayle, Cornwall; or to the auctioneer, Mr. Francis Pryor, Bell Cottage, Redruth.

Dated October 19, 1847. 2

BEAM TIN MINE, IN THE PARISHES OF ROCHE AND ST. AUSTELL, IN CORNWALL.—Circumstances having rendered it expedient to DISSOLVE the present COMPANY of ADVENTURERS, and place the mine on a new basis, Mr. EDMUND BROWNE has been instructed to OFFER the ENTIRE MINE, MACHINERY, and APPURTENANCES FOR SALE, BY AUCTION, in one lot. For this purpose, a SURVEY will be held, at the Queen's Head Inn, St. Austell, on Wednesday, the 10th day of November next, at Four o'clock in the afternoon.

The reputation of this mine, and its produce, is well known in Cornwall. The tin is of the very best quality, and the concern has been, for its extent, one of the most lucrative in the county. The certainty of abundance of tin, at a few fathoms below the adit, and the efficient state of the present machinery, renders the concern a most desirable investment. The sole reason of the mine being thus offered to the public, is the inability of some shareholders, holding a large interest, to advance the requisite capital. Most of the other adventurers are ready to join a new company, that will work the mine efficiently.

Parties wishing to treat for the mine by private contract, may apply to Mr. Browne, by whom due notice will be given, should any such sale be effected—and of whom any further particulars respecting the mine may be obtained.

St. Austell, October 26, 1847. 3

AT THE CHAMBER OF NOTARIES IN PARIS.—TO BE SOLD, BY PUBLIC AUCTION, on the 16th of November, 1847, with the reserved price of £40,000, the celebrated ESTABLISHMENT, founded by M. Hallette, sen., situated at ARRAS, PAS DE CALAIS, in complete organisation, containing FORGES, FOUNDRIES, and WORKSHOPS, for the MANUFACTURE of STEAM-ENGINES, for the Royal Navy, Commerce, and Railways, with all its PLANT and TOOLS, and the BUILDINGS, GROUNDS, and APPURTENANCES belonging to the same. The whole comprising about four acres, and affording constant occupation to 600 workmen.

For further information, apply personally, or by letter, at the offices of Mr. A. Bouard, French Advocate, 5, Chancery-lane, where prospectuses may be obtained. 4

WALL'S END COLLIERY.—TO BE LET, and entered upon on or after the 20th November next, for such a term of years as may be agreed upon, all that current-going COLLIERY, well known by the name of WALL'S END COLLIERY, at present held by William Russell, Esq., under lease from the Dean and Chapter of Durham—comprising the COAL MINES under the whole of the lands in the township of WALL'S END, in the county of Northumberland.

The Low Main and the Beaumont Seams, which have been bored to, remain throughout untouched; and the Beaubam Seam supplies the vend of the existing colliery.

The colliery is contiguous to, and has shipping berths in, the River Tyne. 5

Plans of the workings of the colliery, and further particulars, may be known on application to Mr. E. F. Boyd, Urpeth Colliery, Chester-le-street; or at the office of the Registrar of the Dean and Chapter of Durham, Durham.

Durham, Sept. 11, 1847.

TO LET, the MINERALS in the LANDS of FAULDHOUSE, parish of LESMAHAGOW, and county of LANARK, consisting of BLACK-BAND and CLAY-BAND IRONSTONES, COAL, and OTHER MINERALS. These minerals, to the extent of about 550 acres, are situated into the most valuable portion of the Douglas and Lesmahagow Mineral Basin, and will be completely opened up by the railways already authorised, and in course of construction. The minerals in a portion of the lands immediately adjoining are already let, opened up, and in active operation—thereby proving their value; whilst the large fields in the neighbourhood, still unoccupied, makes the above well worth the attention of ironmasters and capitalists.

Apply to John Smith, Esq., writer, Lanark, the proprietor; or James Ferguson, mining engineer, Auchinleath, Lesmahagow, respecting the terms of lease, and other particulars.

Auchinleath, Sept. 10, 1847. 6

TO BE LET, the PARK-HILL MINES, DEAN FOREST, GLOUCESTERSHIRE—containing ONE MILLION TONS OF COAL, and ONE MILLION TONS of rich IRON ORE, which, being calcareous, smelts well with argillaceous ironstone, and may be delivered in large quantities to the Staffordshire, Shropshire, and Welsh iron-works, at a price far below the cost of local ironstones. The mines are drainable by level, and can be opened at a trifling expense; and, were blast-furnaces erected, their produce might be smelted on the spot into excellent iron.—Apply (post-paid) to Henry H. Fryer, Esq., solicitor, Coleford, Gloucestershire. 7

FOR SALE, BY PRIVATE CONTRACT—A single-acting PUMPING-ENGINE—cylinder 30-inch diameter, 9-inch stroke, equal beam, with 7-ton boiler, cisterns, spring beam, and first set of rod-shafts attached, being the engine of Wheal St. Cleer.—For particulars apply to Capt. Osborne, Liskeard; Mr. West, engineer, St. Blazey; or Mr. Rendle, the purser, 13, Octagon, Plymouth. 8

FOR SALE, a 70-inch cylinder ENGINE, without boilers.—For price, and further particulars, please apply to Samuel Grose, Esq., engineer, Wall, Gwinear, Camborne. 9

STEAM-ENGINES.—From 8 to 20-horse power ENGINES ALWAYS IN STOCK.

Apply to Mr. CAPPER, Engine-Maker and Founder, BIRMINGHAM.

Price—£12 to £16; with boiler, £22 per horse. 10

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,

33, *HAWLEY-ROAD, KENTISH TOWN, LONDON,*

to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual. 11

ADCOCK'S PATENT SPRAY PUMP.—This important INVENTION having been PERFECTED, and brought into SUCCESSFUL PRACTICAL OPERATION at LLANHIDDEL, at pits belonging to R. J. Blewitt, Esq., M.P., Llantarnam Abbey, near Newport, Monmouthshire, the PATENTEE is ready to RECEIVE, and to execute, ORDERS.—Apply to Henry Adcock, C.E., at his offices, 157, Strand, London, where pamphlets, descriptive of the invention, may be had; at the office of the *Mining Journal*, 26, Fleet-street; and through any respectable bookseller—price 2d. 12

PATENT GALVANISED IRON AND WIRE ROPE WORKS, *MILLWALL, POPLAR.*

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £20, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging. 13

OFFICE FOR PATENTS, 7, STAPLE INN, HOLBORN, J. MURDOCH (successor and late assistant to Mr. Hebert)

Informs INVENTORS and PATENTEES, that, at his OFFICE, they can obtain REFERENCE TO A CLASSIFIED LIST OF PATENTS,

(THE ONLY ONE EXTANT), which shows at one view all the Patents ever granted for any particular object, whereby they may save much trouble and expense, and procure information not otherwise obtainable. BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED.

SPECIFICATIONS carefully prepared, and REPORTS of ENROLLED SPECIFICATIONS furnished on moderate terms.

FINISHED and WORKING DRAWINGS executed with accuracy and dispatch. 14

LONDON AND PROVINCIAL JOINT-STOCK LIFE INSURANCE COMPANY.—The DIRECTORS invite the public generally, also BUILDING SOCIETIES and BORROWERS, through them or from other parties, to examine the peculiar system and striking advantages offered by this office.

Every description of life assurance, investment, and loan business transacted.

Low rates of premium and three-fourths of profits divided.

For prospectuses, &c., apply to JOHN MASSON, Secretary.

Offices, 39, Nicholas-lane, Lombard-street. 15

ORIGINAL REGISTRY OFFICE, FOR THE SALE AND PURCHASE OF MINING SHARES.

No. 28, THREADNEEDLE-STREET, LONDON.

CROSSMAN, SOMMERS, AND CO., AGENTS.

SHARES FOR DISPOSAL.

Devon and Courtenay Consols	South Wheal Sophia
East Birch Tor	Sourton Consols (Sourton)
East Crowndale (Tavistock)	Treiawney
East Wheal Rough Tor	Wheal Susan
Great Wheal Rough Tor	Wheal Ann (Bridford)
New East Crowndale	Wheal Barbara
North Wheal Camel	&c. &c. &c.

SHARES FOR PURCHASE.

Marke Valley. Wheal Calstock. Wheal Treiawney. 16

METROPOLITAN SEWAGE MANURE COMPANY.—WANTED, an ENGINE, on the Cornish principle, of from 30 to 50-horse power. Persons having such for sale, are requested to furnish particulars and price to the secretary, 7, Waterloo-place, Pall-mall, London, Oct. 21, 1847. A. GREIG, Secretary. 17

METROPOLITAN SEWAGE MANURE COMPANY.—INCORPORATED, 1846.

The directors are carrying out the national objects for which this company was incorporated, and will receive APPLICATIONS for some UNALLOTED SHARES. The liability of shareholders is limited, and interest is allowed on deposits and calls, and the most careful calculation exhibits a profit of from 15 to 20 per cent.

A. GREIG, Secretary.

FORM OF APPLICATION FOR SHARES.

To the Directors of the Metropolitan Sewage Manure Company.

GENTLEMEN,—I hereby request you to allot me shares, of £20 each, in the above company; and I undertake to accept the same, or any less number that may be allotted to me, to pay the deposit of £1 per share thereon, and to execute the necessary deeds when required.

Name and address.....

Profession or business.....

Reference..... 18

STRONG MIXING PIG-IRON.—The YSTALYFERA IRON COMPANY beg to solicit ORDERS for their ANTHRACITE PIG-IRON. This iron mixes well with Scotch pig—imparting to it strength and elasticity, and receiving from it a portion of its softness and fluidity. No. 3 Pig is recommended for mixing with soft iron—Nos. 1 and 2, for machinery castings, requiring great soundness and strength. At this period, when cast-iron is so much employed in the construction of bridges and other buildings, requiring all the strength and elasticity which the best mixture of metal will afford, it may be interesting to call attention to the characteristics of ANTHRACITE PIG-IRON, as REPORTED on by that great practical authority, the late DAVID MUSHET, Esq., M.I.C.E.:—

"It greatly exceeds, in *strength*, in *defective* powers, and capacity to resist *impact*, any iron at this time manufactured in the United Kingdom."

"It now only remains for me to mention a property peculiar to this iron, which was noticed at the time I made the trial experiments, four years ago, but which has been more fully developed in those more recently made. The property referred to is one of *great springiness*, or *elasticity*, which communicates a tendency to the bar, in deflecting and breaking, to resume its rectangular form. Bars that had obtained a permanent set of 2-10ths, when afterwards broken, presented but a slight deviation from a right line; and in no case, did the curvature exceed one-fourth of a tenth."

"It was also remarked, that most of the fractures, in breaking, presented a *regularity of grain* throughout, resembling the structure of *unhardened steel*."

Address THE YSTALYFERA IRON COMPANY,

Dated June 22, 1847. *Near NEATH, SOUTH WALES.* 19

HOT-BLAST WITHOUT COAL, LABOUR, OR REPAIRS. DIXON AND BUDD'S PATENTS.

Apply for particulars, or to inspect the process in operation on six blast-furnaces, to J. Palmer Budd, Esq., Ystalyfera Iron-Works, near Neath.

Dated June 22, 1847. 20

CUNNINGHAM & CARTER'S PNEUMATIC RAILWAY SYSTEM.—The attention of the scientific public is requested to this SYSTEM, which unites great simplicity with economy, and is entirely free from those dangers and consequences which are the inseparable attendants on the use of the locomotive engine. The MODEL may BE VIEWED, and every information given, on application to Mr. Cunningham, Auction Mart Coffee-house; or Mr. Carter, engineer, Peak-hill, Sydenham. 21

BRETT AND LITTLE'S TELEGRAPH.—The attention of Railway Companies is INVITED to the OPINIONS of the PRESS, in reference to our ELECTRIC TELEGRAPH.—For terms of license, or to view, apply to BRETT & LITTLE, Furnival's Inn, London.

"The working models of their various inventions make an exceedingly interesting exhibition to scientific men."—*The Times*, August 18.

"There is scarcely a necessity that is not supplied, and that by mechanism of singular simplicity."—*Morning Herald*, August 19.

"The whole is a highly interesting and intellectual exhibition."—*Mining Journal*, August 21.

"An extremely interesting exhibition—not only to the man of science, but to every one anxious to comprehend the working of the electric telegraph."—*Illustrated London News*, August 28. 22

ELECTRIC TELEGRAPH COMPANY.

LONDON, 345, STRAND, September 1, 1847.

COMMERCIAL TELEGRAPH.

The works of the lines for commercial communications, between the places enumerated below, embracing a SYSTEM of TELEGRAPHS for COMMERCIAL PURPOSES only, and distinct from that reserved for the special use of railways, being so far advanced as to admit of their completion by the commencement of the coming year, the directors think that the time has now arrived, when it becomes their duty to make known the arrangements which they contemplate for the accommodation of the public.

STATIONS will BE OPENED, in central situations, in the PRINCIPAL TOWNS, whence MESSAGES and DISPATCHES will be FORWARDED TO, and RECEIVED FROM, all the OTHER STATIONS of the ELECTRIC TELEGRAPH COMPANY.

In order to give to Merchants, Bankers, Manufacturers, and all connected with trade, the greatest possible amount of information, a ROOM will be RESERVED in each of the COMPANY'S STATIONS for SUBSCRIBERS, in which will be received, tabulated, and exhibited, all Intelligence of Commercial or Public Interest—for instance:

SHIP LISTS, from the various Ports.
SHARE LISTS, from the various Exchanges.
PRICES CURRENT.
STOCK EXCHANGE LISTS.
CORN MARKETS, from the various Towns.
PRICES OF LIVE STOCK, &c. &c. 23

In LONDON, a CENTRAL STATION, suited to the importance of the metropolis, is in COURSE OF ERECTION, in the immediate vicinity of the Bank and Royal Exchange; in this Station the whole TELEGRAPHIC NEWS of the COUNTRY will be CONCENTRATED, and FORWARDED in EVERY DIRECTION. And here, as in other towns, a ROOM will be RESERVED for SUBSCRIBERS.

The SUBSCRIPTION to these ROOMS will be TWO GUINEAS per annum, paid in advance, which will entitle SUBSCRIBERS to the RIGHT of ENTRANCE to ALL the SUBSCRIPTION ROOMS of the COMPANY—including the Central Station at London.

The foregoing details some of the advantages of the Commercial Telegraph to subscribers; but the requirements of the public in general will be provided for by the establishment of offices, which will at all times be open for the reception and transmission of messages and dispatches; while messengers will be kept at the various stations, by whom dispatches may be sent out to any part of the town where the communication has been received by Telegraph at the Company's Station.

Subscribers' Names are received at the Commercial Telegraph Office, where any further information may be obtained.

The following are the Towns to which the Commercial Telegraph will be first extended:—

London	Chester	Southampton	Derby	Darlington
Margate	Liverpool	Winchester	Nottingham	Newcastle
Ramsgate	Rotherham	Dorchester	Lincoln	Berwick
Deal	Barnsley	Bristol	Chesterfield	Edinburgh
Dover	Wakefield	Gloucester	Sheffield	Glasgow
Folkestone	Leeds	Cheltenham	Bradford	Scarborough
Canterbury	Halifax	Peterborough	Wisbeach	Bridlington
Northampton	Rochdale	Yarmouth	Lowestoff	Stamford
Coventry	Hull	Huntingdon	Cambridge	Norwich
Birmingham	Maidstone	Hertford	Chelmsford	St. Ives
Wolverhampton	Tonbridge	Manchester	Ipswich	Ware
Stafford	Gosport	Leicester	York	Colchester

J. LEWIS RICARDO, Chairman.

VIADUCTS AND OTHER RAILWAY WORK.—The attention of Railway Engineers, Architects, and Contractors is particularly directed to the great advantages to be derived from the application of SEYSSEL ASPHALTE, as the *only impervious and permanent* covering for arches and roofs, and lining of reservoirs, gutters, &c. The arrangements of CLARIDGE'S PATENT ASPHALTE COMPANY enable it to execute works of any extent with the greatest promptitude.

In order to guard against the use of spurious materials, it is important that all applications for works to be executed be made direct to this company; and, as a further protection, it is suggested that Engineers, Architects, and Contractors, should require a CERTIFICATE from the company that the proper description of material has been used.

Information may be obtained as to all works which have been executed by the company since its establishment in 1838, which will prove that the failure of many works represented to have been done with the genuine material has resulted from the substitution of a spurious one.

I. FARRELL, Secretary,

Seyssel Asphalte Company, Stangate, London. 24

CONTRACT FOR COALS.—ADMINISTRATION OF THE POST-OFFICE OF FRANCE.—Notice is hereby given, that, on the 12th of November, 1847, TENDERS will BE RECEIVED in the Council Room of the General Post-Office, at Paris, for the SUPPLY of THIRTY-EIGHT MILLIONS TWO HUNDRED THOUSAND KILOGRAMMES of LARGE COALS, to be DELIVERED in CALAIS and different PORTS in the MEDITERRANEAN, for the service of the General Post-Office steam-packets.

Conditions for the above supply can be ascertained at the French Consul General's Office, No. 3, Copthall-buildings, City. 25

ARTICLED PUPIL.—WANTED, a well-educated, clever, YOUTH, not under 14 years of age, as an INDOOR PUPIL, for a term of FOUR YEARS; he will be brought up as a PRACTICAL SURVEYOR, CIVIL ENGINEER, COMMERCIAL and LAND AGENT—he will also be instructed in the SURVEYING, WORKING, and MANAGEMENT of MINES, MINING PROPERTY, and QUARRIES.

Apply at Mr. Richardson's, 5, Whitefriars-street, City. 26

TO RAILWAY ENGINEERS, CONTRACTORS, AND OTHERS.—The ADVERTISER having obtained her Majesty's Letters Patent for an IRON TRUSS BRIDGE, peculiarly adapted, from its great strength and economy, for RAILROADS, is ready to treat with such companies, and other persons, as may feel disposed to adopt it. This bridge has been put up in the United States, on the New York and Harlem Railroad, and is highly approved of by the directors—in consequence of which several other companies are giving their orders for its erection. 27

A model can be seen, and further particulars given, either personally or by letter, on application, to Mr. S. Moulton, care of the Editor of the *Mining Journal*, 26, Fleet-street.

TO CAPITALISTS, ENGINEERS, AND OTHERS.—The ADVERTISER has some important IMPROVEMENTS in STEAM-ENGINES, &c., which have met with the full approbation of competent authorities, and now requires pecuniary assistance in patenting the same. The inventor feels assured, that any gentleman having knowledge of these matters, will be satisfied with his plans, both in a scientific and commercial point of view, as to induce him to render at once the desired co-operation.—Address Mr. Weston, care of the Editor of the *Mining Journal*, 26, Fleet-st. 28

IMPORTANT TO IRONMASTERS.—Powerful and efficacious BLAST CYLINDERS, with STEAM-ENGINES to work the same, all complete, constructed on a very superior principle, SUPPLIED at ONE HALF the USUAL COST.

References, and full particulars, can be had on application to Mr. Dircks, agent for Patented Inventions, 32, Moorgate-street, City. 29

IRON FOUNDRY TO SELL, OR LET, IN MONTROSE.—TO BE SOLD, OR LET, as may be agreed on, the LINKS FOUNDRY OF MONTROSE, along with STEAM-ENGINE and TOOLS necessary for a local trade.—Apply to D. Y. Stewart.—Montrose, October, 1847. 30

MR. R. TREDINNICK, MINING AGENT AND DEALER IN EVERY DESCRIPTION OF SHARES.

THREE KING'S COURT, LOMBARD-STREET, LONDON. 31

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE, PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS. 32

JAMES LANE, MINING SHARE DEALER,

75, *OLD BROAD-STREET, LONDON.* 33

BRITISH MINING OFFICES, No. 12, HAYMARKET, And No. 41, MOORGATE-STREET, LONDON,

And No. 4, STAMP-OFFICE BUILDINGS, MANCHESTER.

At either of which places PROSPECTUSES and SHARES in the various SILVER-LEAD and COPPER MINES connected with these offices, may be obtained.

T. H. TAUNTON, London.
W. SHEARMAN, Manchester. 34

MONEY.—MESSRS. WINSTANLEY & CO., Sharebrokers, inform their friends and the public, they make IMMEDIATE ADVANCES, to any amount, on the deposit of English and Foreign Railway Shares, Scrip, and Debentures, upon exceedingly advantageous terms: they also BUY and SELL every description of STOCK and MINING SHARES, at much less commission than usually charged.

6, Bank Chambers, opposite the Bank of England. 35

IMPERIAL BRAZILIAN MINING ASSOCIATION, Winchester House, Broad-street, London, October 25, 1847.—Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of the proprietors of shares in this association will be HELD at the London Tavern, Bishopsgate-street, on Tuesday, the 16th November next. The chair will be taken at Two o'clock precisely.

GEORGE THOMAS, Acting Director.

N.B.—The auditor's statement may be seen at the office three days before the above meeting. 36

PATENT GALVANISED IRON COMPANY.—Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the shareholders of this company will be HELD at the London Tavern, Bishopsgate-street, on Monday, the 8th November next, at One o'clock precisely; and is specially called, for the purpose of considering the propriety of calling up the remaining £4 per share on the 20,407 effective shares of the new capital of the company, created 28th October, 1845.

By order, S. VINCENT, Secretary.

3, Mansion-house-place, London, October 22, 1847. 37

TRELEIGH CONSOLIDATED MINING COMPANY.—A DIVIDEND, being the third, of SIX SHILLINGS per share, or 5 per cent. upon the paid-up capital, has this day been declared, PAYABLE on Monday, the 11th October inst., and on every succeeding Monday, between the hours of Eleven and Three o'clock. The coupons, with a list, according to a form, which may be obtained at the office, must be left for examination three clear days previous to payment.

57, Old Broad-street, October 6, 1847. WM. NICHOLSON, Secretary. 38

NOTICE.—It having been determined, with a view to the more EFFECTUALLY WORKING of the MINE, formerly called "West Wheal Jewel," but now as the TOLCARNE MINE, in the parish of CAMBORNE, to apply to the lord of the soil for a NEW LEASE—all persons claiming to be interested therein, are requested to attend a MEETING, to be HELD at Tyack's Hotel, on the 15th day of November next, precisely at Twelve o'clock; and all such persons as shall not be in attendance, or shall not be represented at such meeting, will not be allowed to become shareholders in the new undertaking. In the mean time, letters should be addressed to Mr. Edward Tippet, purser of the said mine, Camborne. 39

ECTON MINES, STAFFORDSHIRE.—A Special General Meeting of adventurers in the above mines was held at the offices, 4, King-street, Cheapside, on Wednesday, the 27th of October, 1847.

PETER DAVEY, Esq., in the chair.

At which encouraging reports on the prospects of the mines were read from Mr. Williams and Captain Bonsall (of an adjoining mine), dated 26th inst. The balance-sheet was also passed, subject to being audited.

The cost-sheet for September amounts to £186 16s. 7d. The future cost, including the current month, is estimated at £120 per month.

It was resolved,—That a call of 10s. per 1024th share be now made—payable at the bankers of the company (the London and Westminster Bank, Southwark Branch, in the name of J. J. Jerdoin, Esq., and others), on or before the 27th November next.

JAMES CROFTS, Purser and Secretary. 40

TAMAR SILVER-LEAD MINING COMPANY.—At the Annual General Meeting of shareholders in this company, held at the offices, 44, Finsbury-square, on Thursday, the 21st inst., it was

Resolved,—That the reports, of the directors, P. N. Johnson's, and Capt. Sprague's, together with the accounts, now submitted, be received, adopted, and entered in the minute-book.—Carried unanimously.

Resolved,—That the thanks of this meeting are due to Mr. Johnson, for bringing the mine and smelting-works to their present state, and his conduct in the chair on the present occasion; as well as to the directors, for their attention to the affairs of the company.

P. N. JOHNSON, Chairman. 41

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its usefulness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you: they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall. 42

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1826, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each.

DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis. 43

Congress at Science in Italy.

[We are indebted to WILLIAM POLE, Esq., for the following comprehensive report of the very interesting proceedings at the Grand Congress of Science, at Venice.]

I trust I shall not be performing an unacceptable service to your readers, in sending you some account of an event which has infused more life into this city than the old veins of the Queen of the Adriatic have known for many a day. A strange combination of fasts and philosophy has usurped the dominion for the last three weeks over, not only 120,000 Venetians, but one-third as many strangers in addition, attracted hither by the unwonted spectacle. I will endeavour to give you an idea of both the gaieties and the gravities, allowing, of course, to philosophy the preference.

The *Congresso degli Scienziati Italiani*, is an institution, the nature and objects of which are similar to those of our British Association—namely, tending to collect together once a year the men of science of the country, for the purpose of contributing to the advancement of those branches of knowledge in which they are respectively interested. It was formed in 1839, and its meetings have already been held in eight Italian cities—Pisa, Florence, Lucca, Naples, Padua, Turin, Milan, and Genoa—Venice being the ninth. The principal difference between the Italian Association and ours is, that the members here subscribe nothing to the funds—all expenses being borne by the city where the congress is held. There are two classes of persons allowed to join the congress—1st. Effective members (*scienziati*) who are endowed with full privileges, and are only received on producing proof of their scientific acquirements.—2d. *Amatori*, who have less extensive rights, and from whom less is required. The number of the former enrolled at this meeting was 1472, of the latter about 2000. The list of *scienziati* was composed, of course, principally of Italians, but contained also many names of other nations, including fifteen English, five of whom took active part in the proceedings. At the head of these, our countrymen, were Sir Roderick Impey Murchison, and the celebrated botanist, R. Brown.

The congress was opened on the 13th September, by the celebration of high mass in the Basilica of St. Mark; after which a general meeting was held in the splendid council hall of the ducal palace. The president, Count Andrea Giovanelli, delivered the inauguration address, in which he rapidly glanced at the advantages of such institutions, the benefits derived from the former meetings, and expected from the present, the particular conditions of Venice, and such other matter as is usually given on such occasions. The secretary, Sig. Pasini, then read a list of deputies from various scientific societies of Italy, and alluded to the experiments and investigations about to be undertaken through the liberality of the Municipal Government of Venice. The meeting being concluded, the various sections adjourned to the smaller rooms of the palace, and proceeded to the election of their respective presidents—the scientific business commencing next day.

The sections into which the congress was divided were nine in number—namely:

PHYSICS, MATHEMATICS, and MECHANICS.
GEOLOGY and MINERALOGY.
GEOGRAPHY and ARCHÆOLOGY.
AGRICULTURE (*Agronomia*) and TECHNOLOGY.
BOTANY and VEGETABLE PHYSIOLOGY.
CHEMISTRY.
ZOOLOGY, COMPARATIVE ANATOMY, and PHYSIOLOGY.
SURGERY, and
MEDICINE.

The following brief notice of the proceedings of each, will serve to give a general idea of the subjects treated; for more ample information, reference may be made to the *Transactions*.

PHYSICS, MATHEMATICS, AND MECHANICS.

PRESIDENT—Professor Luigi Magrini, of Milan.

September 14.—The PRESIDENT opened the session with a few words of thanks for his election, and the usual official announcements. He then proceeded to give a notice of some electro-magnetic experiments, proposed to be tried during the present congress, for the purpose of throwing light on the disputed subject of telluric currents, using the apparatus lately constructed by Professor Villerstorf, in this city (an apparatus, on Wheatstone's plan, for putting into communication the clock of the Piazza St. Marco with that of the Naval School). After some discussion, a commission was appointed to prosecute the inquiry.—Sig. MERLINI proposed some means to render aeronautic ascents less dangerous.

15*th*.—Professor TONELLO read a memoir, on the necessity of a dictionary of marine for the Italian service; on which the Vice-President took occasion to solicit communications for the Supplement now publishing to the Technological Dictionary.—Professor ORIOLA pointed out some properties of four remarkable points of the ellipse; and Sig. MALACARNE presented an instrument for measuring triangular areas.—The PRESIDENT then made some critical remarks on a certain published memoir on electricity, by Professor Matteucci.

16*th*.—Sig. ARCARI communicated a memoir on impact and pressure, considered as means of overcoming the resistance of solids. A discussion followed, and, the subject being considered important, a commission was appointed to investigate and report upon it.—Professor CAVALLERI presented an instrument for measuring the diameter of the pupil of the eye. This was also discussed, and referred to a commission.—Sig. MERLINI proposed a method of sub-aqueous illumination, by means of the action of a galvanic current on charcoal.

17*th*.—The VICE-PRESIDENT (Cavalier Minotto) offered some remarks on the danger occurring to steam-boilers from imperfect alimentation, and suggested a method, analogous to that of Cardan, for maintaining constant the level of the water. A discussion followed, after which—Sig. MERLINI described an apparatus, proposed by him, for help in cases of shipwreck.—Cavalier FOACELLI presented and described a model of an apparatus for preventing railway carriages running off the rails, and other improvements. An animated discussion followed, and the subject was referred to a commission.

18*th*.—Professor TARACCHI read a brief abstract of two memoirs, on certain geometrical superficies and loci.—Notices were given of meteorological and magnetic observations made at Trieste and at Udine; and a recommendation added, that further inquiries should be prosecuted with reference to the declination of the needle in the Adriatic.—Sig. MANZINI gave a detailed description of the salt works of Venice; explaining the methods he had adopted, and contrasting his plans with those followed in France, Istria, and Comacchio.—Announcement was made, of the intention of the Society of Encouragement of Milan, to publish annually compilations of scientific information; and honourable mention was made of a work of the same nature, already commenced by Dr. Francesco Selmi.

20*th*.—The PRESIDENT announced the presentation of two essays (one from England), in competition for the premium offered by the Marquis Pallavicino, for the best memoir on the question, "What is the motive-power most beneficially applicable to railways?" The judgment belonged to the present congress, and a commission was appointed to adjudicate upon the rival compositions.—Colonel MARINOVICH called attention to the subject of lightning conductors on board vessels. He recommended the system of Mr. Snow Harris, when freed from the danger of lateral discharge, as that which would probably be found most beneficial. A commission was appointed to investigate the subject.—Professor TONELLO made some remarks on the recent innovations in the construction of steam-vessels, dwelling particularly on the objections to the use of iron as a material. A long extract was read from an official opinion given by Mr. Morgan, of England, to the Austrian Lloyd's Company, in reference to the construction of new vessels for their service.—An extract was read of a memoir by Colonel CARCANO, on the rectification of a certain element of calculation in the theory of locomotives.—Professor PERROD read a memoir upon the different action of the two electricities upon frogs; and added some observations on the diaphragms of voltaic piles of constant force. This paper was considered of much importance, and was discussed the following day.

21*st*.—A third essay was announced, in competition for the Pallavicino prize.—Captain ARTAJAN read his memoir, on the necessity of compiling a code of signals for the Austrian marine. A long discussion followed, in which it was recommended, that an attempt should be made to render some one code common to the whole Mediterranean, that of Marryatt being considered best adapted to the purpose. It was mentioned, that this code has been translated into Italian and German, and is now being published in both languages, at Trieste.—Professor MINICH read a paper on the integration of a certain species of equations, and a discussion followed.

22*d*.—Professor BARCALARI read a memoir on the universality of magnetism. A discussion took place on the last-mentioned paper, in which the necessity of proving the action of magnetism on expansive fluids was principally dwelt on; which, if real, would open a new path to theory.—The remainder of the session was occupied by papers on improvements in aerostation, and on two minor mathematical subjects.

23*d*.—Announcement was made of the publication, in Naples, of the first volume of a Dictionary of Italian Marine.—Professor MINICH gave some results on the theory of trochoidal curves, and other allied subjects.—Sig. DE LORENZI described a new air machinism, applicable to organs and other instruments. The object was, to enable the performer to sound simultaneously two organs, without requiring any extra force upon the keys.—Sig. ARCARI made a communication relative to railways across the Alps, and the methods hitherto known for constructing them in mountainous countries. A permanent commission of mathematicians and engineers was appointed to entertain the subject, it being considered one of much importance.—The PRESIDENT read a notice of experiments about to be tried on the transmission of sound in long cylindrical tubes, tending to the verification of certain laws in the vibratory motion of elastic fluids.

24*th*.—Some conversation took place on several subjects of mathematical interest.—Mr. W. POLE presented a memoir on the alimentation of steam-boilers; referring to the methods adopted in England, and suggesting means for diminishing the dangers of explosion. This was followed by various remarks from engineers present.—Cavalier SANTINI, of Padua, read an important paper on the last appearance of Biela's comet, and the perturbations caused on its orbit by the earth.

25*th*.—Professor MAGRINI read a memoir on the constitution of electricity, illustrated by the results of various experiments. A discussion followed.—Papers were read, on a new system of locomotives; on a water-engine, by Sig. Milesi; and on integration.

27*th*.—Papers were read, on integration; on a machine for tracing ellipses; on the Observatory of the Venetian Marine College; on the direction of the railway between Venice and Milan; and on a method of finding the latitude, by two altitudes near the meridian.—Various reports of committees were read and approved, and the President closed the section.

GEOLOGY AND MINERALOGY.

PRESIDENT—The Marquis Lorenzo Pareto, of Genoa.

September 14.—The PRESIDENT, in opening the session, alluded to the various and important localities presented to this congress in the neighbouring mountains, for the study of the secondary and tertiary rocks of the north of Italy, and of the advantages which would result to science by a comparison of these with the strata of other parts of Europe.—Professor CATULLO read a memoir on the tertiary beds of the Venetian district, and of certain parts in particular. A long discussion ensued, embracing also kindred questions, which occupied the whole of the session.

15*th*.—Baron DE BUCH read a notice upon the muschelkalk found in some valleys of the meridional Alps, and presented specimens of fossils.—Sig. DE ZIGNO exhibited a series of fossils of the Jura chalk, and other beds. The author entered into particulars, with reference to the characteristic fauna of these rocks, and a discussion followed.

16*th*.—A memoir was read by Sig. CANGIANO, on the Artesian well now being sunk at Naples; after which, M. DECOUSEE gave a detailed account of the works of the same kind executing in Venice. These notices, and the discussions consequent upon them, occupied the whole time of the meeting.

17*th*.—General VACCANI presented a description of an Artesian well at Vienna, and further discussion ensued respecting those in Venice.—Sig. EWALD read an important paper on the nummulitic rocks, in which he distinguished three zones, or epochs. This gave rise to a long discussion.

18*th*.—Major CHABRAND read a paper on the formations in the Vicentine district; and Sig. ZIGNO followed, with observations on the muschelkalk, which led to a further discussion.—General VACCANI presented various maps of Italy, upon which it was intended to found a geological map of the Peninsula. A commission was formed to determine certain points relative to the publication.

20*th*.—Signeur HAUER read a notice on the ammonites of Halstadt and of Aussé.—The PRESIDENT presented a memoir on the mountains of Cozzino, in Garfagnana. This paper was considered of much importance, and it was resolved to insert it entire in the *Transactions*.

21*st*.—Was occupied in visiting the geological and mineralogical collections in the University of Padua.

22*d*.—A discussion took place on the Padua collections; after which Signor PASINI presented new fossils of the Vicentine and Bellunese rocks, and recommended them to the study of the section.—Sig. PALEOCAPA gave an important account of the modifications which the Port of Malamocco (the principal entrance to the Lagunes of Venice) had received, from ancient epochs down to the present time, by the action of currents and the effect of artificial works. He described the works now constructing, and augured for Venice an era of commercial prosperity, which should render less painful the memory of past misfortunes.

23*d* and 24*th*.—Were devoted to excursions—the former over the Lagunes, the latter to the hills near Vicenza.

25*th*.—After some remarks on the preceding excursions, Sir RODERICK I. MURCHISON gave illustrations of the succession of rocks in the oriental Alps, as they had been defined by himself and Professor Sedgwick, explaining some modifications rendered necessary by late discoveries. He presented his map of these formations, and pointed out some errors in that of the Austrian dominions, published by Haidinger.—Professor MENEGHINI presented, in the name of Mr. Robert Brown, a selection of fossils.—A memoir from Cavalier COLLEGNO was read, tending to establish, by new and precise observations, a correspondence between the Jurassic series of the Gulf of Spezia, and that of the Lombardic Alps.

27*th*.—Sir RODERICK MURCHISON presented his work on the "Geology of Russia," and added important communications on the relation between the structure of this vast region and that of the Alps. He also presented other English works, and communicated various notices of geological interest.—M. DE VERNEUIL presented a geological map of a certain part of Russia, by Sig. Keyserling; and announced, that a discovery had been recently made in that country and Switzerland, of fossils presenting individuals of species actually living in the Caspian and Arctic seas.—Other presents were announced, and a discussion took place on the fossil combustibles of the Venetian provinces.—Papers were read on marine currents, and on certain other geological phenomena, which led to remarks on the engineering works of the Laguna.—Notices were given of excursions proposed to be undertaken after the conclusion of the congress, and the section was dissolved.

GEOGRAPHY AND ARCHÆOLOGY.

PRESIDENT—Cavalier Adriano Balbi, of Venice.

Sept. 14.—The PRESIDENT, in opening the session, pronounced an eulogy on the merits of the Italians, and especially the Venetians, as geographers, declared the objects of the section, and offered a cordial welcome to the distinguished visitors present, among whom he mentioned the Cavalier Ritter, prince of living geographers, Sir Roderick Murchison, and the Count Graberg.—Several questions were then proposed, and partially discussed, with reference to the celebrated map of the world, by Fra Mauro, which adorned the room where the section was held.

15*th*.—The Marquis ALBERGO described a tablet recently discovered at Paloszolo, in Sicily, bearing cuniform characters, hitherto undecyphered. A commission was appointed to examined it.—Signor BONTURINI announced the discovery, at Udine, of the code printed by Cauciani, under the title of *Lex Romana*, but incomplete.—A paper followed, on certain etrusean excavations at Garolda.

16*th*.—This day was devoted to a discussion upon ancient maps in general, and particularly upon the atlas of Santarem, and Fra Mauro's map of the world.

17*th*.—Cavalier RITTER mentioned some discoveries made by Chevalier Maltomed, of Tunis, in a city of the Wadai Sudan. A sepulchre was found, and a plate of copper, covered with unknown characters and symbols of the sun, with which also other monuments in the city were adorned. This discovery would tend to show the existence of a country intermediate between the civilization of Egypt, and that of internal Africa, and to throw light upon certain inscriptions recently discovered by Lepsius. A discussion followed upon the credibility of the relation, and upon other minor matters.

18*th*.—After some formal proceedings, Cavalier RITTER spoke of the great influence which maratime expeditions had over commerce. He entered into many illustrations, and dwelt upon the disputed question of the situation of Ophir, which, he said, ought probably to be sought in India, between the Indus and the present Bombay, and not at Sofala, or in Arabia Felix.—Sir R. MURCHISON coincided in this opinion, although much controverted, on account of the want of gold in this region. In answer to this, he explained the geological theory, that this metal is usually found in the superficial strata, and might, therefore, have abounded in localities where it is now exhausted. Sir Roderick then presented two recent maps of Australia, and made some remarks upon expeditions in that country.—Professor FERRUCCI proposed the publication of a map of Ancient Italy; and a discussion followed, upon the best manner of expressing geographical names in different languages.

20*th*.—The meeting was occupied in various archæological subjects of minor interest.

21*st*.—Count MINISCALCHI read the report of the commission upon Fra Mauro's Map of the World. The resulting opinion was, that the map was founded upon the works of Marco Polo, of Nicoloo de Conti, and other ancient or contemporaneous travellers; and that it may be regarded as the finest monument of the geographical science of those times.—The discussion upon geographical nomenclature and orthography was continued, and excited much interest.

22*d*.—Communications were read on the *Pala d'oro* of St. Mark; on certain passages of the *Iliad*, considered with regard to the history of astronomy; on the architecture of Ravenna; and on other subjects.

23*d*.—A copy of the work of Cavalier Nicolini, upon the Temple of Jupiter Serapis, at Pozzuolini, being presented, the PRESIDENT took occasion to remark upon the importance of this monument to geological science.—Sig. PASINI expounded the theory of the author with regard to the mutations of level, a theory at variance with that generally received by geologists.—A conversation ensued, on the choice of a first meridian of longitude for Italy.—Sig. PASINI proposed, for the sake of uniformity, to adopt that of France, or England; but the President preferred Rome, and the meeting appeared to be of the same opinion.—The remainder of the sitting was occupied with remarks and eulogies upon the works of the celebrated Venetian traveller, Marco Polo.

24*th*.—The Abbate CAPPELLETTI described the Etruscan Necropolis of Polimarzio, and alluded to its importance, as throwing light upon the Etruscan language. This was followed by a discussion, and by various papers and remarks on minor matters.

25*th*.—Baron HUGEL made some observations on Cachemire, a country hitherto little known. He painted out errors concerning it, and presented a topographical map—the result of his travels.—The Count GRABERG read an abstract of a history of geographical science, considered with regard to Italy in particular. This had already occupied portions of previous sittings.—Sig. CASANI gave a description of Transylvania, noting its mineralogical riches, its language, and ethnology.—A long discussion then followed upon the railways proposed for Italy.

27*th*.—After some conversation, and the presentation of gifts to the section, Sig. BONTURINI read the result of his examination of the *Lex Romana*, which gave rise to an interesting discussion.—Sig. MINOLA described his mode of facilitating the study of numismatology, and the President closed the section.

AGRICULTURE AND TECHNOLOGY.

PRESIDENT—His Excellency Count Andrea Cittadella Vigodarsero, of Padua.

September 14.—This day was occupied by matters almost exclusively formal.

15*th*.—Was devoted to the consideration of the agricultural institutions of Italy, and the best means of diffusing knowledge among the population of the rural districts.

16*th*.—The previous day's subject was continued, after which Count MORANDO explained his processes of vinification, which were discussed by the meeting.

17*th*.—Sig. MERLINI exhibited a machine for grafting mulberry trees.—Dr. GROSSI read a memoir on an insect (the *Vochea brassica*), which damaged the *zea mais*.—Dr. COMINZONI treated of the cultivation of a certain species of osier willow.

18*th*.—Dr. BIASOLETTO recommended the cultivation, in Italy, of the *Sorgum durra*—a species of corn used in Egypt for bread, and offered to distribute some specimens to the section.—Count PORRO gave an interesting notice of the plans of Professor Giulini, for an institution for the patronage of released criminals: this led to a discussion upon prison discipline in general.—Sig. ZAMBELLI read a paper on the necessity of instructing the clergy on the subjects of hygeine and pathology.

20*th*.—After some conversation on popular education, and the presentation of one or two mechanical contrivances, Dr. SACCHI gave an exposition of the plans of the Society of Arts of Milan, for establishing a house of reception for infants. He discussed at length the necessity for such institutions—their objects and advantages—and the meeting expressed a lively interest in the communication.

21*st*.—Papers were read on the mortality of infants in the country, and on improvements in the cultivation of mulberry trees.—A discussion was then opened on the potato disease: the results of many experiments and observations were laid before the meeting, but it was thought desirable to refer the further consideration of the subject to the Academy of Physico-Medical Statistics at Milan—the president of which institution undertook the charge.

22*d*.—Baron HUGEL made an important communication on a substitute for the potato—the use of which it was desirable to establish throughout Europe. He alluded to the *Apios tuberosa*, a native of America, which had been known in Europe since 1540, merely as a botanical curiosity. It vegetates like the potato—has a handsome and fragrant flower, and, when cooked, a pleasant farinaceous taste. He had seen this root in Austria and Bohemia, and found it thrive well in soils not humid, but strong and tenacious.—Dr. BIASOLETTO coincided in these statements, and related that the plant was already naturalised to some extent in Italy.—Count SCOPOLI gave a statistical statement of the number of cattle, &c., existing in Italy, which he estimated at 2,400,000 oxen, 600,000 cows, 3,000,000 sheep, and 480,000 horses—the total value being 985,000,000 Austrian lire (34,475,000*l*.)—Remarks were made upon the advantage of improving the various breeds.—A proposition was discussed for increasing the agricultural population, by recruiting it from the charitable orphan institutions of large towns.

23*d*.—Remarks and propositions were made on a society for improving the breed of horses—on a disease of clover—on the treatment of silk worms—and on societies of assurance against damage by hail.

24*th*.—Sig. GERLIN communicated some hints on the improvement of skins for the glove manufacture.—The remainder of the sitting was occupied in discussions on the subject of education.

25*th*.—This day was devoted to reading the reports of several commissions.—A premium was awarded to Professor Mazzerrella for the best translation of the *Georgics of Virgil*, enriched with technical notes.

26*th*.—Sig. GERDOLETTI spoke at length upon the subject of public charities, and the best means of provision for the poor. An interesting discussion followed, and a commission was appointed to entertain the subject.—Sig. BELTRAME communicated a project of a house of correction for those who refuse to work.

27*th*.—The commission appointed upon the subject of Artesian wells announced, that they had this month commenced, and repeated, with the happiest result, the experiments for which a certain grant was set aside—namely, to prove the practicability of Fauvelle's method of boring—extracting the material excavated by the injection of water, without withdrawing the auger. Details were given of the experiments, and the results appeared to justify the opinion, that, where the strata were not too absorbent, the method alluded to rendered the operation more easy, expeditious, and economical.—Various reports of commissions were read, and the president, after reviewing briefly the proceedings of the section, declared it closed.

CHEMISTRY.

PRESIDENT—Professor Giocchino Taddei, of Florence.

September 14.—The PRESIDENT commenced the meeting with an address, in which he dwelt upon the utility of scientific *réunions*, on the advantage which chemical science, in particular, derived from them, and of the necessity of the further propagation of chemical knowledge in Italy. He congratulated the meeting on the presence of the celebrated Balard; and invited communications to the section.—Dr. TOMINI presented a prospectus of a synonymical nomenclature in chemistry.—Sig. GALVANI read a memoir on an acid, extracted from the leaves of the *sabina*, which he called sabinic acid; exhibiting a specimen of the acid itself, and of its combination with soda.—Sig. SELMI communicated various inquiries instituted as to the solubility of cream of tartar in sulphuric, hydrochloric, and nitric acid.—A discussion followed.

15*th*.—Sig. KOBELL, of Munich, described a method discovered by him for reproducing pictures and designs on copper, by means of galvanography; exhibiting various magnificent proofs, from plates engraved in this manner.—Dr. RAVIZZA read a paper on the use of hyposulphate of soda, internally and externally, for the solution of biliary and other calculi.—Sig. SELMI, described an experiment, by which he obtained a violet solution of iodine in sulphuric acid, and noticed the changes to which this solution was subject.

16*th*.—Dr. PARMEGGIANI recounted some experiments, relative to the solubility of fibrine and membrane in salts with an alkaline base; and added some notices, explanatory of the formation of these substances in the blood.—Cav. TADDEI read a paper, containing a summary of experiments upon different azotic substances of the two organic kingdoms, showing their various appearances under the combined action of caustic alkali and hydrate of oxide of copper; and founding thereupon some interesting inquiries, in reference to substances used for food.—Sig. GATTOLATO, in pursuance of a commission given him by the Congress of Genoa to examine the potato disease, stated that, using caustic lime and chalk in the plantation of the seed potato, he had succeeded in obtaining an ample and healthy crop.—Dr. BOLOGNA produced other evidence to confirm this assertion.

17*th*.—Prof. ZANTEDESCHI read his memoir upon the physical constitution of matter, and particularly upon bodies in the radient state. He spoke of the volatilization of certain metals under a red heat, and exhibited some vessels in which this had taken place.—A commission was instituted to examine the subject. The remainder of the sitting was occupied upon subjects of minor importance.

18*th*.—Dr. PISANELLO read some considerations on sea-water. From his analysis resulted, that he had not been able to find the least trace of iodine, although he had made use of the best tests chemistry could afford.—Dr. BOLOGNA presented a memoir on the fossil fuel of the Treves district, accompanied with specimens.—Sig. ROCHETTI read a notice upon the preservation of sea-water, and the possibility of recomposing it from the materials it contained.

20*th*.—Dr. RIBOLI related the circumstances of a case of suffocation of seven persons, near a lime-furnace; and some conversation followed as to the cause.—Sig. GRIMAUD DE CAUX read some remarks on climate in general, and on the elements which constitute it—namely: locality, air, and water. Treating particularly of the latter, the author took occasion to call in question the salubrity of the water in the Artesian wells, in Venice. A discussion followed on this latter point, in which contrary opinions were advanced.

21*st*.—The discussion on the water of the Venetian wells was renewed.—A paper was read by Dr. MENICI upon the sun-flower, in which it was affirmed that this plant had the property of producing potasse, by a peculiar physiological power. A discussion followed.—Sig. ZANON read some researches on *Ureolmaina*, a principle extracted from the *Uredo maïs*.

22*d*.—Dr. MASSEROTTI gave a communication on the iodo-idrargirate of bi-ioduro of mercury, adding various experimental facts worthy of attention.—Sig. SELMI gave further explanations, and a discussion of some length ensued.—Dr. WILLIAMSON (England) read some reflections on the manner in which urea is generated in the animal organism.—The PRESIDENT called attention to the importance of this paper, adding various considerations and examples in illustration.—Sig. GALVANI presented some observations on a certain preparation of bismuth.

23*d*.—Sig. BIZIO made some remarks on a specimen of *mannite*, presented a previous day by Sig. Mauro, as prepared by a new process.—A discussion followed as to what component of manna gave it its medicinal property.—A paper was presented from Dr. NARDO on the presence of iodine in sea-water. The author explained how sea-weeds, exposed to the sun, parted with many of their principles to the sea-water—among which was iodine; and thus contrary opinions might be reconciled. The utility of sea-weed baths (*bagni algosi*) was also insisted on.—Other communications were added on analogous points.—A memoir was read on certain false biliary calculi; the true origin and composition of which were pointed out.

24*th*.—Dr. DELVINIOTTI, of Corfu, gave an exposition of the analysis of the mineral waters of Corinth, in Latrachi, and strongly recommended the establishment of baths; the waters being efficacious in several grave diseases.—A discussion followed as to the presence of sulphuretted hydrogen in the waters.—Sig. CALANDRA read a brief notice on the preservation of the petals of violets in the dark.—A memoir was read by Sig. CASANTI upon a new test for distinguishing the human blood from that of the inferior animals—namely: a solution of phosphoric acid.—A letter was read to prove that the author had been able to discriminate exactly between several specimens of blood offered to him for trial.—Dr. BERTAZZI described his process for obtaining the sulpho-cyan-hydrate of quinine, and described its characteristics, properties, and use.

25*th*.—The PRESIDENT exhibited some experiments to show the different effects which liquids, containing organic matter, produced upon hydrate of copper, in the presence of potash, according as the matter was albuminous, or lactic.—Other analogous experiments were also shown.—Announcement was made of, and communications invited for, a new Journal, published at Rome, entitled, *Corrispondenza Scientifica*, under the management of Prof. Scarpellini.—Sig. SELMI made some remarks on the pseudo-solution of Prussian blue, remarking that this substance could not be pronounced a true solution; but rather a kind of emulsion.—Sig. DE CONTI presented specimens of glass vessels, with air-tight stoppers, of an improved construction.—The meeting approved the invention, and recommended its extensive manufacture.—Sig. ZANON read his researches on the acid extracted from the blight (*golpe*) of India corn, which he termed *ureolmainic acid*.

27*th*.—Sig. GRIMAUD read a memoir on organic matter in general, tending principally to combat the idea of spontaneous generation.—Other minor papers were presented; after which, the PRESIDENT, in a complimentary speech, dissolved the meeting.

[*To be continued in next week's Mining Journal.*]

THE CHEMISTRY OF THE METALS—No. IV.

BY J. LOUIS JULLION.

[Written for the *Wolverhampton Chronicle*—Continued from *Mining Journal* of last week.]

METALS WHOSE OXIDES ARE REDUCED BY HEAT ALONE.

SILVER is a white metal of considerable brilliancy; it is found native, and in a variety of combinations. When native it has the general character of the pure metal. It occurs in masses, arborescent, capillary, and sometimes crystallised in cubes and octoedra. It is seldom pure, but contains small portions of other metals, which affect its colour and ductility. It is chiefly found in primitive countries. In Peru and Mexico are the richest known mines of native silver. The mines in Saxony, Bohemia, and Swabia, and those of Kongsberg, in Norway, are the richest in Europe. It has been found in Cornwall and Devonshire. Silver melts at a bright red heat, and when in a state of fusion appears extremely brilliant. It resists the action of air at a high temperature for a long time, and does not oxidize. The tarnish is occasioned by sulphurous vapours; it takes place very slowly upon the pure metal, but more rapidly upon the alloy of copper, used for plate, and was found by Proust to consist of sulphuret of silver. Pure water has no effect upon the metal, but if the water contain any vegetable or animal matter, it often slightly blackens its surface, in consequence of the presence of sulphur. If an electric explosion be passed through fine silver wire, it burns to a black powder, which is an oxide of silver. In the voltaic circle it burns with a fine green light, and throws off abundant fumes of oxide. Exposed to an intense white heat silver boils and evaporates; if suddenly cooled it crystallises during congelation, often shooting out like a cauliflower, and throwing small particles of the metal out of the crucible. This arises, according to Lucas, from the sudden extrication of a minute quantity of oxygen, which the metal absorbs, and is prevented from retaining by a small quantity of copper.

The silver of commerce is procured principally from ores of native silver, of sulphuret of silver, or from ores of lead containing small quantities of this metal, from which it is extracted by the process of the oxidation of the lead, as in the process of cupellation. Ores of native silver, mixed with much stony matter, are reduced to powder on the large scale of machinery, and agitated with mercury and water in a barrel. The mercury combines with the silver and forms an amalgam, which is separated from the stony matter; the mercury is separated by distillation, and the silver is left in the retort. To obtain silver from the sulphuret a more complicated process is necessary. It is heated in a reverberatory furnace with common salt, by which chloride of silver is obtained, and, when it is agitated in barrels with mercury, water, and fragments of iron, the iron removes the chlorine, and is dissolved in the water, while the mercury combines with the silver, forming an amalgam, from which the mercury is separated by distillation. Another method of obtaining pure silver is to dissolve the alloy in nitric acid, and precipitate the silver by a solution of common salt; chloride of silver is obtained, which is to be decomposed in the usual way. To remove the silver from plated goods, the articles are to be immersed in a solution composed of eight parts of sulphuric acid and one of nitrate of potash. This process was discovered by Mr. Keir, who found that it possessed the property of dissolving silver, but not copper, consequently he was enabled to remove all the silver from plated goods without dissolving the articles themselves; the dissolved silver is to be precipitated by muriatic acid, and well washed before it is decomposed.

Oxide of silver is obtained by adding lime water to a solution of nitrate of silver. It is of a dark olive colour, tasteless, insoluble in water, and when gently heated it is reduced to the metallic state; it confers a yellow colour upon glass, and is therefore employed in enamelling and in porcelain painting.

Nitrate of Silver.—Nitric acid diluted with half its weight of water, readily dissolves silver with the disengagement of nitric oxide gas; its solution is colourless and transparent. It is very caustic, and tinges animal substances of a deep yellow colour, which, by exposure to light, becomes of a deep purple or black stain, which is indelible, or peels off with the article; it consists of reduced silver. When heated in a capsule it fuses into a limpid yellow liquid, and if this be cast into small sticks it forms the *lapis infernalis* or lunar caustic of pharmacy, the *argenti nitras* of the *pharmacopœia*. Nitrate of silver is very easily decomposed; if a piece of silk dipped into a solution of nitrate of silver be exposed fully to the sun's rays, it will become black, or even silvered, under peculiar management. Mercury introduced into a solution of nitrate of silver causes the deposition of the silver in a beautiful crystalline form, called by the old chemists the *Arbor Diana*. Nitrate of silver is much employed for writing upon linen, under the name of indelible or marking ink; it is prepared by dissolving 2 drachms of nitrate of silver, 1 drachm of gum, and a few grains of Indian ink in an ounce of water. The preparatory liquid is made by dissolving 2 ozs. of common washing soda, and 2 drachms of gum arabic in 4 ozs. of water. The marking ink, without preparation is prepared by dissolving 2 drachms of nitrate of silver in 2 drachms of strong liquid ammonia, adding gum and Indian ink, to colour and thicken. In using this ink the writing, as soon as dry, should be pressed with a hot iron. Nitrate of silver is also an ingredient in most of the compounds that are sold for the purpose of changing the colour, or dying the hair. It is used in medicines as an excellent caustic. "When taken internally, a very disagreeable effect frequently follows its use, which is the discoloration of the *rete mucosum*; so that the whole surface of the body, and especially the parts most exposed to the sight, acquire a leaden grey or livid colour, which is permanent, and can neither be removed nor prevented."

Fulminating Silver.—Liebig gives the following process for preparing this curious and dangerous compound:—A drachm of refined silver is dissolved in half an ounce of nitric acid, 2 ozs. of alcohol are then added, and the whole heated in a glass vessel: white flocculi soon appear, and when ebullition begins the heat is to be withdrawn; the effervescence, however, continues, and the powder falls; when all action has ceased the powder is to be very carefully collected upon a filter, and well washed; it is then to be dried at a temperature of 100° F. In collecting and handling this powder the utmost caution is requisite: it should be made in small quantities only, and touched with nothing hard, for it has sometimes exploded upon the contact of a glass rod, even under water: the feather of a common quill serves to collect it; it should be kept in a wide mouthed vessel covered by paper, and by no means in a stopped or even a corked phial, as many very serious explosions have resulted from carelessness in handling this compound—even with the greatest care we are liable to accidents of the most fearful character, and its use in fulminating balls, and other articles for amusement, cannot be too strongly censured—its explosive properties are owing to the instability of the fulminic acid contained in the compound, which, from the slightest causes, is liable to decomposition, and thus suddenly extricate a large quantity of gases. Another very curious compound of silver, is the hyposulphite: now the two compounds that are used to obtain this are of a most disgusting flavour, and yet this compound is most intensely sweet, nor is it at all a metallic taste, totally unlike all the other metallic salts known, fully proving "how little we know of the way in which bodies affect the organs of taste. Sweetness and bitterness, like acidity, seem to depend on no particular principle, but to be regulated by the state of combination, in which the same principles exist at different times."

Alloys of Silver.—The compounds of this metal with the kindred metals have not been examined. It unites with difficulty with iron, and does not combine with cobalt, except in very small proportions; it combines with manganese, and readily with arsenic. "When silver and steel are fused together an alloy is formed, which appears perfect while in fusion, but globules of silver exude from it on cooling, which shows the weak attraction of the metals. At a very high temperature the greater part of the silver evaporates, but a portion equal to about 1 in 500 remains, forming a perfect alloy, admirably adapted to the formation of cutting instruments." Alloyed with zinc or tin the metal becomes very brittle. The alloy of the greatest importance is that of copper, because it is that which is used for plate and coin. "By the addition of a small proportion of copper to silver, the metal is rendered harder and sonorous, while its colour is scarcely impaired. The proportion of copper to the silver for the coin, is 0·90 to 1·10. A troy pound of

sterling silver is, therefore, 11 oz. 2 dwts. silver, and 18 dwts. of copper; it is coined into 66 shillings. With lead the alloy is grey and brittle, as also antimony and bismuth. An amalgam of silver with mercury is sometimes used for plating; it is applied to the surface of the copper in the form of paste, and the mercury evaporated by heat, the remaining silver is burnished. The better kind of plating is, however, performed by the application of a plate of silver to the surface of the copper, which is afterwards beaten or drawn out. A mixture of chloride of silver, chalk, and pearlash, is employed for silvering brass: the metal is rendered very clean, and the above mixture, moistened with water, rubbed upon its surface; it is in this way that thermometer scales and clock faces are usually silvered. The assay or analysis of silver is performed by an operation called cupellation; this is merely fusing it with 5 or 6 times its weight of pure lead in a small vessel made of bone earth, called a cupel. This cupel has the property of absorbing the oxides as they are formed, and as the silver is not liable to oxidation at that temperature, it remains as a bright metallic button, after all the alloy is oxidated.

[*To be continued in next week's Mining Journal.*]

On Mining, & the Practical Applications of Geological Science.

PROF. ANSTED'S LECTURES, AT KING'S COLLEGE.

LECTURE III.—GEOLOGICAL CONSIDERATIONS AFFECTING AGRICULTURE.

After some prefatory observations, Professor ANSTED proceeded to explain the points in which the practice of agriculture was affected by geological considerations and knowledge. They were two in number—first, that which related to *materials*, taking one of those great divisions of the subject, mentioned in the preceding lectures: under this head they would have to consider the nature, use, and way of modifying those materials. Secondly, considering the earth as the basis of operations, they would have to observe how agriculture was affected by the arrangement of materials; and how, by a study of certain mechanical laws, affecting the structure of the earth, the soil might be rendered more fertile, by supplying water where needed, or by removing it by drainage when the land was flooded. Certain mineral substances were necessary for the growth of plants; and hence, if they took any of the vegetable substances in common use by man, and exposed them to a high degree of heat—thus getting rid of the carbon, oxygen, nitrogen, hydrogen, and some other elements of the plant—there always remained a residuum of ashes, which contained the mineral substances necessary in the growth of the plant consumed. If, for instance, they took any of the cereals, such as wheat, and burnt its straw, ear, and corn, they would find in the ashes which were left a considerable portion of silica; and in other plants there would be certain quantities of potash, soda, lime, and magnesia, not unfrequently a little iron, and sometimes, but not often, phosphorus. All these, then, were materials necessary for the growth of plants, and it was useful to know whether any particular spot where these plants were intended to grow, possessed the materials necessary for their health and sustenance. A knowledge of the "chemical composition" of soils was, therefore, highly important, as some of the above substances, occurring in certain proportions of the soil, might be noxious, and even poisonous, to some plants; while to others they might be indispensable. There was, in fact, no universal poison. It was also necessary to know something of the "condition" in which these constituents were present in the soil. Supposing, for instance, there were potash, soda, and phosphorus, it was well to know whether these materials possessed a greater affinity for the substances with which they were already combined than the plant was able to overcome, as, in that case, they would not benefit it; or, if those materials or constituents were free, whether they were so much separated as to render them not only useless, but noxious and mischievous. It was also exceedingly useful to know the "mechanical condition" of the soil. Plants throw out roots and rootlets, not only to imbibe nourishment from the soil, but to form a wide-spread basis to support the upward growth of the stems, and to enable them to expose themselves to the weather, or to connect themselves with other plants, according to their peculiar habits. In all cases, it would be useful to know whether the surface of the soil was likely to afford this mechanical support.

In considering the nature of the soil, with reference to plants, it was necessary to do so partly in respect to its composition, and partly as to its derivation. They had nothing to do, as geologists, with the organic substance contained in the soil, which consisted chiefly of carbon in the state called humus—that belonged to the agricultural chemist, rather than to the geologist; but it was necessary that the latter should know what were the mineral ingredients of which the soil was made up, and how far they were capable of adopting themselves to its organic portions. They had nothing to do with the organic portion of the soil itself, but they had a great deal to do with its relations to the inorganic, or earthy, constituents. The three principal ingredients of all soils were silica, alumina, and lime, which mostly existed in the three conditions of sands, clays, and limestones. There were also very important mixtures, known as loams and marls—the former being admixtures of clay and sand, and the latter of clay and limestone. With regard to the next point, all soils were derived from the subsoil, and the mode of derivation was a matter to which he drew particular attention. They were derived by the chemical decomposition and mechanical disintegration of rocks; for the soil was connected with and derived from the rock always, either directly or indirectly. [The lecturer here referred to several diagrams, on which were depicted the soils, as they appeared in the course of derivation from the fundamental rock.] In these cases the derivation was direct; but, in others, when the material was brought from a great distance, it was indirect. It was not, for instance, difficult to divine the way in which the weather acted on the surface, or to understand how fragments of rock might be removed great distances, and deposited many miles from their original beds. Every year vast quantities of material were deposited in the Atlantic, brought by icebergs from the Polar regions, and the materials for future soils were thus obtained *indirectly*; what they had most to do with was, however, obtained *directly*, as almost all soils in England, except gravel, were obtained directly. Soils varied in thickness, from a few inches to 100 ft., or 200 ft.; but, ordinarily, were from a few inches to 3, 4, or 5 ft. in depth. The subsoil also varied a good deal in depth, which depended very much upon local circumstances. The lecturer then referred to the diagram of a road section near Fenrhyn. The foundation was slate-rock, and over that was a kind of rubble, into which the rock was decomposed. Rubble was a general term used to describe any rough disintegrated mixture of rock, or broken fragments, with sand; and from the rubble was derived the subsoil, and from that the soil, on the surface. In another section, of which a diagram was exhibited, the slate at its usual depth lay in the ordinary direction; but, near the surface, it was "bent over." On this the lecturer remarked, that it was impossible ever to determine the true dip of beds close to the surface, as it was a common thing to find it altered at the surface—broken, in fact, as if by some mechanical force, and often inclined at a considerable angle to the underlying bed. This often helped in the formation of soils; for the broken portions became mixed with sand and silt, and formed rubble, from whence the soil was directly derived. In the diagram alluded to, the next bed to the rubble was a loamy clay, which contained about 50 per cent. of sand. This, however, was not silica, and, though it put on the shape of clay, neither was it pure alumina; but a silicate of alumina, mixed with sand. Clay generally contained a good quantity of free sand, and, when mixed with about 50 per cent. of that substance, became loamy clay. In that state it was better fitted for agricultural purposes, though it still required more carbonised matter to make it into soil. In the diagram, there was about 2 ft. of this loamy clay, which was called the subsoil, and above that the true soil, which, in this case, was of a loamy nature, and contained a rather large quantity of sand. Here, then, was the soil and subsoil directly derived from the rock. The lecturer also further illustrated this point by other diagrams, in which granite was the base from which the rubble was formed.

Soils varied much in value according to their different depths, and the textures of their materials. When the depth was small they were liable to be carried away, or to be soon exhausted by the growth of vegetables on it; and then those particular ingredients, on which the vegetables subsisted, were required to be replaced, or a further decomposition of soil, at a more rapid rate than ordinary, became necessary. The application of other substances from a distance was thus sometimes necessary; but, for this, some chemical, as well as geological, knowledge was indispensable, or more harm than good might be done. The texture of soils differed very much. Some were exceedingly dense and heavy, and would not be easily washed away or displaced; but, though permanent, they were often very difficult to be managed, particularly when they were so dense as scarcely to allow the roots of plants to penetrate. Others, again, were so imperfectly made up, and so large and coarse, as almost to preclude the use of the ordinary instruments of tillage. Some soils contained a great deal of clay, and were so tenacious, as scarcely to allow the plough, or even the spade, to act upon them. These were exceedingly unmanageable, for though it might be thought that a large admixture of sand would lessen this adhesiveness, it was generally found that the sand, after a time, formed hard masses, and was apt to collect the clay into lumps, instead of making it more loose. Some soils possessed a large absorbent power; while others would allow water to pass through them very readily. In soils of the latter kind valuable manures were soon washed through them, without producing much effect. In these cases, a remedy might be found in the practical application of geological knowledge, as, for instance, liming the land, by putting on unburnt limestone in small lumps, instead of slacked lime, and trusting to the slow decomposition of the limestone by exposure to the weather. There were many other circumstances of a similar nature, such as the capillary powers of the soil, or its aptitude to crack and form great yawning chasms in times of drought; the relations of the soil with regard to heat, as its soon becoming hot like sand, or remaining cool, or transmitting heat slowly, like clay. These points depended almost as much on the substance that was below it, as on the texture of the soil itself.

The lecturer then proceeded to describe the soils derived from the various geological formations in different parts of England. The districts, which exhibited chiefly the igneous rocks, were the western parts of Cornwall, some portions of Wales, and the greater part of Scotland, in all of which existed some geological conditions, to be considered in reference to agriculture. In composition these rocks were chiefly granitic, or, as it was called, porphyritic; and they were made up of the crystal imbedded in a kind of paste, and generally of crystals of felspar and mica, in a base of quartz. These rocks existed in very different conditions, dependant principally upon the prevalence of the different ingredients, and their different decomposability. First, they had the quartz, often in compact masses, and so hard, that it was exceedingly difficult to break. Where this mineral was in large masses, and not much modified, it presented a most unfavourable condition for agriculture, and indeed was almost hopeless, as it was next to impossible to get it disintegrated by any natural exposure. When mixed with felspar, however, the case was different, for that mineral contained substances of the greatest importance in the composition of plants. When the felspar in granite decomposed readily on exposure, it often formed a very valuable soil. Much of the best soil in Cornwall was in this condition, particularly that on the lower hills, which, being most exposed to the operation of the weather, contained the greatest quantity of granite in a decomposed state. They would always find that the most fertile granite contained a good deal of decomposing felspar. On the condition of the mica also might depend much of the disintegrability of the granite.

The next rock, he would consider, was gneiss, which contained the materials of granite in a mechanical condition. These would also form a fertile soil; but they might safely conclude, if it were hard and compact, that a good soil would not be likely to be formed. In the Highlands of Scotland there was a vast quantity of gneiss and mica slate, and there the country was uniformly barren on the hills, though there were spots which had been made productive. The whole district, however, might be described as barren, affording support to little vegetable produce besides heather.

Another class of igneous rocks were those which were forced up from beneath others, and were called intrusive rocks. Of this kind were the basalts in Ireland, and the enormous masses of India, where there were 300,000 square miles covered with scarcely anything else. These rocks were nothing more than lava, or melted rock, poured out upon the surface; they were readily decomposable, and among the most useful and important ingredients of soil they were not the least valuable. From these rocks were obtained rich and fertile soils, as was exemplified by the districts in which Indian cotton was grown. These rocks, which in England were often called trappean, and which were probably poured out millions of years ago, were capable of being mixed with the soil in their neighbourhood. They contained many of the materials most required by vegetables. Clay-slate was what was called a metamorphic rock, and was, when in its simple and most characteristic form, too little mixed with sand, and contained too few of the materials required by plants to be a valuable substance for soils. It contained, however, a little iron, and sometimes a little soda, and other like ingredients, but not in such a state as would readily mix with carbon, and the gaseous products necessary for plants.

Besides these, there were the oldest rocks, or Silurian rocks, which were formed in Wales, twisted and contorted in every possible way. The lower portion of these rocks were eminently siliceous, with a very small quantity of alumina, carbon, and limestone, and a little potash and soda. Other parts of the Silurian rocks had a great admixture of shales, with nodules of limestone and large lenticular masses, distinctly traceable to local causes. These rocks could be made fertile by careful admixtures.

The Silurian rocks were succeeded by two other formations. The first of these was the old red sandstone, which was found in Scotland, and in corresponding beds in Herefordshire. This, when unmixed, was a very barren rock, and oftentimes formed hills perfectly naked. Assisted, however, with the calcareous lumps called corn stones, it formed sometimes a rich corn land. It was also well adapted for the growth of fruit trees; and produced the apples and pears, from which the famous cider and perry of Herefordshire was made. Devonshire, which was also noted for cider, possessed the same kind of soil, though of a different geological period.

The Devonian rocks, containing a large quantity of silicious matter and schists, which prevailed in Cornwall and the north-eastern parts of Devonshire, were also capable of being mixed with other substances, and rendered fertile. These corresponded in age with the old red sandstone, but differed in mechanical condition.

Next to these succeeded the carboniferous rocks, of which there were three distinct divisions. First, the carboniferous limestone, generally compact in form, very hard, very little weather-worn, not easily disintegrated, and not easily decomposed if not disintegrated, covered mostly with a very thin soil, and well adapted for the pasture of sheep, and other animals, which preferred a close fine grass. Rich soils were seldom obtained by admixtures with rocks of this kind. Next, there was the millstone grit, not so coarse a conglomerate as the old red sandstone, and commonly better adapted by mechanical condition for agricultural purposes; but not often forming a rich soil, though covering a wide extent of country. And, lastly, there were the coal measures, of which the vegetable produce beneath the surface was of far greater importance than the agricultural excellence of the soil. This third class of carboniferous rocks were met with in the northern and central counties, and in South Wales.

The next in succession were the Permian rocks, consisting of the magnesian limestone, which generally coasted the coal measures. This substance could never be safely used as a lime manure—caustic magnesia being always mischievous. The soil derived from these rocks was not remarkable for its richness.

Then came the new red sandstone, which was necessarily a poor soil, consisting of unmixed loose sand, but which was often associated with a considerable quantity of red marl, containing a large proportion of calcareous and argillaceous matter, and this, when brought to the surface, made a most excellent soil. The rich grazing lands of Devonshire and Cheshire, and other parts of England, were constituted of this kind of soil. It was also manageable from its ready drainage, and valuable from the salt obtained from it.

The next substance was lias, and then the whole series of oolites. Lias consisted of thick beds of argillaceous matter, which was more extensively seen in plains and valleys. It formed a very valuable soil, and might be traced throughout England. Lias contained a good deal of calcareous matter, and was not far removed from the new red sandstone on the one side, and the lower sands of the oolites on the other. The oolites were a large class, which supplied in their lower portions a great quantity of building stone, quarried in the neighbourhood of Bath, near Oxford, at Ketton, in Northamptonshire, and elsewhere. These rocks were often overlaid by beds of clay of considerable thickness, as in the fens of Lincolnshire and Cambridgeshire; and in their upper portion the oolites again contained a quantity of hard and valuable building stones, as in Portland Island.

Lastly, there were the cretaceous rocks, which included the dark red sands of Bedfordshire, and the broad and extensive downs of Sussex and Wiltshire, and extended through England to Yorkshire.

The lecturer concluded by saying, that he intended to have made some remarks upon the tertiary soils and gravel, on mineral manures, and the mixture of soils for the improvement of land, and on the use of deep ploughing, which, however, he would reserve for another occasion.

[The next lecture, of which a full report will appear in Saturday's *Mining Journal*, is upon "Agricultural and Engineering Draining."]

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

THIS DAY..... Asturian Mining Company—offices, at Two.
West of England Patent Refining Sugar Co.—offices, Bristol, at One.
MONDAY..... Polsaith Consols Mining Company—at Wh. Gill Mine, at Two.
Grand Union Canal Company—offices, at Eleven.
Basingstoke Canal Company—Gray's Inn Coffee-house, at Two.
TUESDAY..... Highgate Archway Company—offices, at Two.
London and County Railway and General Investment Co.—offices, One.
South Wheal Treiawney—offices, at Eleven.
Caradon Wheal Hooper—Launceston, at Twelve.
WEDNESDAY... Wheal Grace Mining Company—Tavistock, at Twelve.
East Anglian Railways—London Tavern, at Two.
THURSDAY..... Vauxhall Bridge Company—George and Vulture Tavern, at One.

[*The meetings of Mining Companies are inserted among the Mining Intelligence.*]

PATENT GALVANISED IRON COMPANY.

An adjourned extraordinary and half-yearly general meeting of proprietors was held at the London Tavern, on Wednesday, the 20th inst., for the purpose of receiving the report of the auditors, and on other business.

J. S. MANSFIELD, Esq., in the chair.

The CHAIRMAN, in opening the proceedings of the meeting, observed, that it had been convened in accordance with the adjournment of that previously held, and certain resolutions would be submitted, having reference to the financial affairs of the company, with the view of raising such further sum as might be deemed necessary for carrying on the affairs of the company.

In the course of the proceedings, several shareholders took part, and, in reply to questions put as to the finances of the company, and the proposed course to be pursued, we gathered that, of the 25,000 new shares, only 20,407 had been issued, on which 6*l.* per share had been paid—which, with the 10*l.* per share paid on the 25,000 shares, of which the company was originally formed, made a total amount of 372,442*l.*—there being 4*l.* per share on 20,407 shares to which the new shares were liable, and thus making 81,628*l.* to be called thereon; it being understood, that the 4593 shares which had not been subscribed for or apportioned should be reserved by the company—thus making the aggregate number of shares 45,407. It appeared, from the explanations afforded, that the returns for the past six months had not equalled the expectations entertained, while the outlay upon the several works in Wales and Staffordshire had exceeded the estimates; added to which the pressure of the times had contributed to place the company in that position, which rendered it necessary to raise a further capital. This the directors would have gladly avoided, more especially at the present time; but the interests of the company required that no time should be lost in obtaining the necessary funds.

It was gratifying to the directors to be able to state that, although the expenditure had exceeded the estimates made, still their confidence in the undertaking was unshaken; and, indeed, the extensive business transacted by the company, was the best evidence of the successful results which they had a right to anticipate.—A resolution was passed to the effect, that the minutes of the 4th October, having reference to the increase of capital to 600,000*l.*, be confirmed; but that the other part of the resolution, with respect to the issue of preference shares, be not confirmed—the directors being empowered to raise the required capital, not exceeding the 600,000*l.*, in lieu thereof, in such mode as might seem best and practicable—regard being had to the necessities of the company; and a further resolution was also passed, having reference to the unallotted shares, already observed upon.—It was, in the end, determined that a special general meeting of the company should be held at the London Tavern, on Monday, the 8th November, for the purpose of considering the propriety of calling up the remaining 4*l.* per share on the 20,407 effective shares of the new capital of the company, created 28th October, 1845.

Thanks having been given to the chairman, after some desultory conversation, and expressions of disappointment, on the part of one or other, which were met by the assurances of the directors of their confidence in the undertaking, the meeting adjourned.

SWANSEA DOCK COMPANY.

An extraordinary general meeting, held pursuant to public advertisement of the shareholders in the above company, took place at the company's offices, Quay Parade, from whence it was adjourned for the convenience of the parties in attendance to the Castle Hotel, on Thursday last, October 21, for the following purposes:—

1. To receive the report of the committee appointed by the shareholders at their first general meeting.
2. To determine as to the reduction of the number of directors of this company to nine, or such other number as may be considered desirable, and as to the particular directors to be discontinued consequent on such reduction; also, to determine the order of rotation in which such reduced number of directors shall go out of office.
3. To determine as to the amount, if any, to be paid to the directors who have usually attended the London meetings of this company, as a consideration for their past services and disbursements.
4. To determine as to the discontinuing the London solicitor, and the London officers and offices of this company.

And, To adopt such resolutions, and do such other acts relating to the several matters above-mentioned, as may then be determined on or agreed to.

The names of the shareholders who attended will be found in our advertising columns

The chair was occupied by Capt. E. MORGAN, R.A. (the chairman of the company), who, after the advertisement convening the meeting had been read, and the sealed register of the company laid on the table, said, that prior to proceeding with the regular business for which the meeting was called together, the shareholders would, doubtless, wish to have some information from the secretary (Mr. G. G. Francis), and the solicitor (Mr. J. T. Jenkin), of what had transpired yesterday in London, at a meeting which had been most irregularly and illegally convened. (Hear, hear.) The chairman then requested the secretary to read the report of the committee of shareholders which had been appointed by the general meeting of shareholders, held in London on the 31st of August, to recommend such arrangements as they (after making due inquiry into the matter) should think most conducive to the success and efficiency of the company. [The report of this committee will likewise be found in our advertising columns. It will be seen that Mr. A. C. Howden, the assistant-secretary, and Mr. Elderton, the London solicitor, members of the committee, dissented from the report.]—These documents having been read, the SECRETARY (Mr. G. G. Francis) stated, that Mr. Jenkin and himself had just returned from London, to which place they had gone, at the request of the Swansea directors, in consequence of the extraordinary step which had been taken by the London directors of convening a meeting to be held there one day before this—the regularly convened meeting of shareholders. That, acting under the advice of eminent counsel, they had attended the meeting at London, and strenuously urged its illegality, and also stated that all proceedings at it would be utterly void. That the chairman of the London meeting had, however, stated it to be his determination to hold it—he being, as he asserted, the best judge of its legality, and not requiring the assistance, either of counsel or solicitors. (Hear, hear.) That, thereupon the following protest was handed to him by Mr. Jenkin:—

"We, the undersigned, being respectively shareholders of the Swansea Dock Company, do hereby, for ourselves, and on behalf of the several shareholders for whom we are respectively entitled to vote as proxies, *protest* against the legality of the alleged extraordinary general meeting of the shareholders of the said company, announced to be held at the Guildhall Coffee-house, in King-street, in the city of London, on Wednesday, the 20th day of October inst. And we severally declare, that all votes and proceedings which may be given or adopted by us, or either of us, at such alleged meeting, for ourselves, or as proxies for other shareholders, will not be an admission of the legality, or regularity of such alleged meeting, and are not intended to operate as a waiver or relinquishment of the right of ourselves, or either of us, or of any of the shareholders for whom we are respectively entitled to vote, to dispute the validity of the same, notwithstanding any such votes or proceedings. And we severally maintain and insist, on behalf of ourselves and the respective shareholders for whom we are entitled to vote, that the said alleged meeting, and all resolutions and other proceedings which may be passed, or adopted thereat, will be illegal, inoperative, and void. Dated this 20th day of October, 1845.—R. EATON, S. Carter, G. G. Francis, J. Richardson, G. Nicholls, J. T. Jenkin."

That, notwithstanding this protest, and without giving the slightest weight or attention to any arguments or reasoning on the subject, the chairman proceeded to hold the meeting, and to pass resolutions thereat, taking the opinion of the parties present by a show of hands, without inquiring whether the persons who held up their hands were really shareholders, or actually represented a majority of votes, and refusing to grant a poll which was demanded by Mr. Jenkin and other Swansea shareholders, on behalf of themselves and the proxies entrusted to them, amounting to considerably more than half the registered votes—(hear)—and that, in consequence of the entire irregularity of the proceedings, the whole of the parties protesting quitted the room.

A PROPRIETOR: How many London shareholders were present at the meeting?—The SECRETARY: There could not have been half-a-dozen, besides the chairman and five directors—the latter of whom moved and seconded the resolutions in their own favour.

Mr. JENKIN then stated, that he had never previously attended a meeting in which so much irregularity and unfairness had been permitted; and that not only in his own opinion, but according to the advice of the very eminent counsel whom he had consulted, the whole proceedings with regard to the London meeting were, in their opinion, altogether absolutely void, and not voidable merely.

The CHAIRMAN: Then we will now, if you please, proceed with the business of this meeting. He (Capt. Morgan) then laid on the table a document which he said was an agreement entered into with the London directors, by virtue of which the latter should take suitable offices and premises in London, obtain shareholders, and assist in carrying the company's bill through Parliament, having an assistant-secretary for the purpose of corresponding with the secretary at Swansea.

Mr. RICHARDSON: Well, after the bill has been obtained, does not that agreement do away both with the Swansea and London directors?—Mr. JENKIN (the solicitor of the company) said, that the directors named in the Act were continued in office until others were appointed; but there was, in the mean time, a power given of reducing the number.

Some conversation ensued, in the course of which the CHAIRMAN read the clause of the Act bearing on the point. He then remarked that it would be necessary that the meeting should confine itself to the business for the transaction of which it had been specially convened. He would, therefore, request the secretary to read *seriatim* the various subjects to be brought before them.

The SECRETARY then said, the first business was to receive the report of the committee appointed by the shareholders at their first general meeting.

Mr. C. T. WILSON, as a shareholder, and one anxious to witness the success of the scheme, begged to move the first resolution (which, as well as all others passed at the meeting, will be found in our advertising columns), to the effect that the report in question be received and entered on the minute book.—Mr. I. M. MOSES seconded the proposition, which was carried unanimously.

The SECRETARY said, that the next business in the notice was, to determine as to the reduction of the number of directors of this company to nine, or such other number as may be considered desirable, and as to the particular directors to be discontinued, consequent on such reduction; also, to determine the order of rotation in which such reduced number of directors shall go out of office.

Mr. MOGGRIDGE felt much pleasure in moving the next resolution, which provided for reducing the number of directors. He had always been of opinion that no good to the company could result from having a large number of directors, who must have different degrees of interest in the undertaking. He rejoiced that the proposal originated with the shareholders in London, as it would unquestionably come from them with a better grace than if the reduction had been first proposed at Swansea.—Mr. MAXWELL seconded the proposition, which, on being submitted to the meeting, was carried *nem. con.*—Mr. JAMES JAMES moved, and W. H. FRANCIS seconded, the resolution, providing that certain directors named should be discontinued.

The CHAIRMAN begged to state, with reference to the circumstance of Mr. Thomas Walters' name being included among the directors to be discontinued, that it arose partly from a desire on the part of the directors here to comply with the wishes of the committee, and Mr. Walters kindly complied with that desire, allowing his name to be withdrawn. They valued his services as much as those of any of the other Swansea directors, but Mr. W. Walters being also one of the directors, on the part of his father, proposed his retirement. If they permitted him (the chairman) to allude to a personal matter, he would say that Mr. Walters' services were 10 times as valuable and efficient as his own, and he regretted that the circumstances named should lead to his retirement.

Mr. W. WALTERS said, that the proposition having been moved and seconded, he begged to state that the proceeding met with the entire concurrence of his father. Indeed, it was proposed by himself, being advanced in years; and he (Mr. W. W.) being already a director, he was led to the conclusion that it would be more expedient for him to retire, and thus enable the wishes of the London committee to be literally carried out.

Mr. L. L. DILLWYN expressed his regret that they should lose Mr. Walters' assistance, as he was one of the most efficient members of the board.—Mr. W. H. FRANCIS remarked that the company would still have the benefit of Mr. Walters' advice and assistance.—The proposition was then put to the meeting, and carried unanimously.

A proposition was then suggested, to the effect, that it was inexpedient to enter at present on the consideration of remuneration to the directors, who had been discontinued. It was also explained, that several of the London directors were not the same as those who originally joined the company before the passing of the Act.

Mr. C. T. WILSON begged leave to ask the chairman, how long had the present directors been in office?—The CHAIRMAN said, Col. Cameron and his sons, and Captains Norcott and Earle, had been directors from the commencement. Mr. Price succeeded on the retirement of Sir A. P. Green. The fact was, that the London gentlemen expected payment for their services, while the Swansea directors were desirous of receiving nothing from the capital of the company. Of course, if the shareholders decided upon remunerating one section of directors, why not the other?—Mr. L. L. DILLWYN, as one of the directors of the company, and who had attended nearly all its meetings, would protest most strongly against receiving any money out of the capital of the company. Should the undertaking succeed to such a degree that a surplus revenue would accrue, it might at a future time form a fit subject for discussion, whether the directors, whoever they then might be, should be remunerated on account of the services they might render; but, until then, he would, as he had before said, protest against paying a penny out of the capital of the company. He might likewise observe that this was the principal point of difference arising between the Swansea and London directors.—Mr. CALVERT R. JONES, as a director, entirely coincided in the opinions expressed by Mr. Dillwyn.

Mr. W. WALTERS remarked, that the London directors had, in the first instance, joined the company because the docks would be of advantage to their colliery and railway.—Mr. MAXWELL: It is quite evident that they wished to make a job of the whole affair.

The CHAIRMAN remarked, that it was understood from the formation of the company, that the directors were to receive no remuneration. He did not know what motive influenced the London directors; but, on the part of those at Swansea, he could say that what they wished was, to see the docks constructed.

Mr. RICHARDS, in reference to the resolution which had been read, remarked, that perhaps the London gentlemen might not take the same view of the subject as was entertained by that meeting. The Swansea directors having declined to accept any remuneration for their services, it was a matter for consideration whether it would not be expedient to vote something to the London directors, in case they claimed it.—The SECRETARY suggested that the resolution left the matter open for future consideration.

Mr. RICHARDSON asked, whether it would not be better to go a little further, and invite them to apply for compensation.—The SECRETARY informed the meeting, that Mr. Howden, on the part of the London directors, had informed the chairman and himself that it was not the intention of the London directors to accept any fees; and read from the minutes a memorandum to that effect.

Mr. HUXHAM: Then, why claim it now?—Mr. JENKIN: Because they appear to have changed their minds.—Mr. WILSON begged to ask, if they could claim anything by law?—Mr. JENKIN: They might claim out-of-pocket expenses, but nothing from the capital of the company.—After some discussion the resolution was carried unanimously.

The resolutions in reference to the assistant-secretary and solicitor were then passed. A vote of thanks to the committee of shareholders in London was agreed to, on the motion of Mr. J. WILLIAMS, and seconded by J. W. LEACH.

Mr. W. WALTERS then moved a resolution to the effect, that the thanks of the shareholders be given to the gentlemen now ceasing to be directors, for their past services. He (Mr. W.) thought this resolution to be in conformity with established custom. Notwithstanding the differences which had for some time existed between the Swansea and the London directors, yet the meeting could not do less than thank the latter gentlemen for their past services.—Mr. C. T. WILSON seconded the resolution.

The CHAIRMAN said, that the shareholders were unquestionably under the greatest obligations to the committee of shareholders in London, for the trouble they had taken; and as to the services rendered by the London directors, he would state, that had they not assisted, he did not think the bill would have been carried.

A vote of thanks to the chairman having been proposed by Mr. HUXHAM, and seconded by Mr. L. L. DILLWYN, was unanimously carried.—The CHAIRMAN, in acknowledging the compliment, congratulated the company on the unanimity prevailing among them. He assured the meeting that such had been the case among the Swansea directors at all their meetings; from the commencement there had not been a single amendment moved. (Hear, hear.) He hoped such would always be the case.—The meeting then separated.—*Swansea Herald.*—The resolutions will be found in another column.

PHENOMENA OF LIGHT—IMPORTANT DISCOVERY.—At a late meeting of the Royal Cornwall Polytechnic Society, Mr. Hunt addressed the company on the interesting subject of some recent discoveries, and which he himself originated, respecting the various powers of the solar rays. About six years ago, he announced that, associated with the light and heat derived from the sun was another principle, most active in producing extraordinary changes in the organic and inorganic world. This principle he at first called *Energia*; but since, on the suggestion of Sir John Herschel, it had been called *actinism* (from the Greek *aktis*, a ray of the sun). Subsequent researches had established the fact that the solar ray contains three principles, and distinct means of action—light, heat, and actinism. His present observations referred to the influence, separately and in combination, of these three principles, on vegetation, showing that seeds placed under the influence of solar rays that permeated through yellow glass would not germinate, because yellow glass prevents the passage of the actinic principle, with its chemical action. Mr. H. then illustrated, by explanations of the various effects on vegetation of different coloured glasses, the necessity of the combined influence of the three principles, of light, heat, and actinism, to the complete germination, growth, and inflorescence of plants. He then showed how beautifully consistent with these recent discoveries were the arrangements of the Divine Being in the process of vegetation. During spring the solar beam contained a large amount of the actinic principle, necessary at that season for the germination of seeds, and the development of buds. In summer there was a larger proportion of the light-giving principle, necessary to the formation of the woody portions of plants. And towards autumn, the calorific or heat-giving principles of the solar rays increased. Mr. Hunt exhibited diagrams, showing the proportions of the three principles as they had been observed to exist in the solar ray, in the seasons of spring, summer, and autumn. He then showed how the vegetation of different climates was variously affected, according as they received different proportions of the three constituent principles of the solar beam. In practical application of the results of this theory, Mr. Hunt spoke of the injurious effects on vegetation from the use in greenhouses of the white German sheet glass. Under this kind of glass, plants were subject to an injurious solar influence which they had not suffered under the old crown glass. It became, therefore, necessary to discover some means to cut off those *parathermic* rays, which, passing through the white glass, scorched and browned particular portions of the leaves, without cutting off the other portions of the rays, which were necessary to the growth of the plant. This remedy Mr. Hunt had discovered and applied at Kew Observatory; it was a green glass, stained with oxide of copper, which glass effectually excluded the injurious parathermic rays, while it admitted the other solar rays necessary for the plant, as freely as ordinary white glass. In the manufacture of this green glass, it was essential that no manganese should be used, as was the case in white glass. If manganese were used the glass would, after a while, assume a pinkish hue, which would more freely admit the burning rays. Mr. Hunt also spoke of the difference between morning and afternoon rays in their effect on vegetation, and of the probability of vegetation being affected by the polarisation of light.

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—We have holed the shaft, sinking on the Slob, to the 18 fm. level, and it a fortnight shall be able to make it available for drawing at that depth; the lode in the winze behind this end is not looking altogether so well for ore; but the stopes east and west of it are looking better, worth about 10*l.* per fm.: the stopes also under this level, west of flat-rod shaft (Doyle's) are rather improved, worth about 12*l.* per fm. The back of the 12 fm. level, for 7 or 8 fms., looks well worth from 16*l.* to 20*l.* per fm.; the stopes on the middle lode, under this level, do not look altogether so well, worth at present about 6*l.* to 8*l.* per fm. The water is still falling at Nangle's; we hope to see the bottoms here in a short time; the men working in the backs at this part are breaking a fair quantity of ore on tribute. The lode in Kiln shaft is very large and regular, 4 feet wide, white iron, thinly mixed with lead, not rich enough to save; its underlay is south 1 ft. in a fm. There is a small branch in the adit end, about 4 in. wide, mixed with lead.—Oct. 22.

BEDFORD UNITED.—At Wheal Marquis, the lode in the 90 fm. level, east of the sump winze, is worth 80*l.* per fm.; the south lode, in this level west, is worth 20*l.* per fm. In the 80 fm. level east the lode is 3 ft. wide, and worth about 15*l.* per fm.; there has been no lode taken down in the western winze in this level. The lode in the 70 fm. level east is from 2 to 3 ft. wide, good saving work. The lode in Harvey's winze in this level, and in Hooper's rise in the 58 fm. level, is without alteration. At Liscombe, there has been no lode taken down in the adit level, or rise in this level. The lode in the 25 fm. level, east of the south engine-shaft, is 2½ ft. wide, composed of spar, gossan, and ore. In the adit level east the lode is 2 ft. wide, producing stones of ore in places.

CASCADE.—The adit level is extended 6 fms.; the strata is bastard slate, with veins of quartz and capel, spotted with mundic and spots of yellow copper ore, dipping south. The ground is much the same as last week—fair price for driving, 4*l.* per fathom.—October 26.

COOK'S KITCHEN.—At Chapple's lode, the engine-shaft is now down to the 190 fm. level, and we shall immediately commence driving east and west on a very large lode, which, from the nature of the ground passed through in the 180 fm. level, we have reason for hoping will be more productive at some distance, both east and west of the shaft, than it has been in the shaft itself. In the 180 fm. level east the part of the lode on which we are driving is 4 feet wide, and worth about 5*l.* per fm.; in the 180 fm. level west the part of the lode which we are carrying is 5 ft. wide, and worth about 15*l.* per fm. In the winze, sinking under the 170 fm. level east, the part of the lode on which we are sinking is 3½ ft. wide, and worth 8*l.* per fm. In clearing the adit, west on the Druid lode, we have not been able to do much since the last report, the men having been engaged in raising stone for, and other work connected with, the new wheel-pit. The tribute department has experienced some improvement. We have very nearly finished the excavations of the wheel-pit, and the masons will be enabled to commence next week to build the walls for the support of the wheel; the wheel itself will be in course to go in its place as soon as the mason-work, &c., is accomplished—so that we shall have no delay in getting our stamps into operation.—Oct. 25.

CUBERT.—The ground in the engine-shaft continues much as usual. In the 35 fm. level east, the lode is 2 ft. wide, composed of hard spar, mundic, and stones of lead; west, in the same level, the lode is 3 ft. wide, carrying a leader on the south part 6 or 8 in. wide, worth about 1 ton of ore per fm. In the 25 fm. level west, the lode is 1 ft. wide, composed of spar, mundic, and yielding a little lead. In the 15 fm. level west, the lode is 15 in. wide, soft spar, mundic, and lead, worth about one-third of a ton per fm. There is nothing new of any importance in the tribute department; the men are all working well, and are, in general, getting wages.—Oct. 22.

DEAN PRIOR AND BUCKFASTLEIGH.—We shall complete the building of the 40-ft. water-wheel in the course of two or three days; having some of the plants prepared, we shall commence making and fixing the launders to carry the water over the wheel with all possible speed, which, being fixed, we shall immediately change the gear, pitwork, &c.; the masons are getting on as well as we can expect with the walls of the 24 ft. wheel-pit; the excavations for the balance-bob pit will be completed this day. We are making the necessary preparations underground, by repairing the levels and shafts; and as to fixing the pitwork to prepare for the same, we are getting on with all the surface work in all its branches, and shall lose no time to bring the work into effect.—Oct. 25.

DEVON AND COURTENAY CONSOLS.—The lode in the 30 fm. level, driving west, is 2 ft. wide, composed of branches of spar, mundic, and copper ore, mixed with killas; there also appears to be more water coming from the lode now, than at any time since we left the cross-course. In the deep adit level, the lode is 2 ft. wide, composed almost entirely of spar and mundic—this spar has interrupted the branch of lead ore mentioned in my last report; but, as the ground is very changeable in this end, I calculate upon an alteration again very soon. The lode in the end, driving east from the flat-rod shaft, on the north lode, is 1½ ft. wide, composed of can, white iron, mundic, with some occasional spots of ore. The lode in the stopes, west of the shaft, on the same lode, having been taking down, has produced some good work; but it having taken a direction too much to the south of the mean lode, and having also diminished, I have suspended operations in this place. The pitch in the back of this level, west of shaft, continues to look well, and I think rather improved. The engine-shaft is progressing as fast as possible, being now about 7 fms. below the 30 fm. level.—Oct. 26.

EAST ALVENNEY.—I am just now returned from this mine, and I think Capt. Hollow would say with me, if he now saw the mine, that it is worth 5000*l.* more than last week. We have discovered another lode, about 6 fms. further south than that we are sinking on; I think it is one of the kindliest lodes I ever saw; it is about 2 ft. wide, underlaying south about 2 ft. in a fm., composed of beautiful gossan, large stones of wolfram, a great deal of mundic, and large spots of tin, with blue can (or fluor-spar); the ground around it is a kind of an elvan, or rather of a fine dark decomposed granite—I do not scruple to say, that such a lode never can fail from being productive. Our mean perpendicular engine-shaft is just in the direction to take this lode at the depth of 15 fms., where we expect to discover a rich course of tin. I cannot see through the ground; but really, from present appearances, I should think no miner in England could say it will fail from being productive at the above depth. In our shaft, on the middle lode, I see no important alteration since last reported; but, if anything, it is rather better—Capt. Hollow says it is a most splendid lode, and as rich a one as ever he saw. We are dressing some splendid work, or crop tin, and are using our efforts in getting the stamps in order for the coarser work.—Oct. 27.

EAST CROWNDALE.—The ground in the cross-cut north, in the 47 fm. level, continues hard; it is now driven 7 ft.; I hope in the course of next week to report the north lode being cut; we have eight men in this cross-cut, the remainder of the sampmen are busily engaged casing and dividing the shaft, and other necessary jobs, preparatory to our resuming sinking the shaft. The ground in the shaft, sinking below the adit level, at Rix Hill, is favourable for sinking, and the water not very quick; the lode is 4 feet wide, composed of killas, peach, capel, spar, mundic, and tin. In the adit level west, on the north lode, at Rix Hill, the lode gradually continues to increase in size and quality, it is now upwards of 3 ft. wide, composed principally of peach, capel, and tin; some excellent tinwork has been broken here the past week, and, from the good appearance of the lode, I confidently expect a good course of tin before many feet more be driven. There has not been much done in the past week in cross cutting south, the men having been engaged in sinking the shaft. Our engine and pitwork in good order.—Oct. 23.

ECTON.—*Oct.* 26.—Herewith I beg to hand you the cost sheet for Sept. month, amount 178*l.* 14*s.* We are now working on the prescribed scale of your last meeting, by which we shall materially lessen the monthly cost. We have had a great deal to do to get the mine in a little better repair, as everything was left to go in a most wretched condition. We have now accomplished this, and our future operations will be confined wholly to exploring the ground. I am sorry to say, in my report of the mine, we have no riches; but our prospects, in my opinion, are certainly very flattering. You are aware, our underground operations in the old mine were confined to two objects—the one, driving the 30 fm. level, in which we have not yet cut the lode—we have about 9 ft. more, according to the dialling of the ground, to reach it; the other object is that of rising in the back of the 150 fm. level, above the range of spar mineral, which is a continuous bunch for nearly 20 fms. in length; and I am perfectly satisfied, and morally sure, that, by developing this deposit, we shall find the vein will, in the same place, put up and lead to a bunch of ore above; there is every appearance in the minerals themselves to indicate it, and, for your satisfaction and inspection, I have sent a box of them to the office, from which you can easily perceive, that nearly every particle of its metallic composition is copper; and by breaking any of the crystals, you will find the copper disseminated throughout—as further proof of this, above those spars we find stones of copper ore, such as I have sent in the brown paper. My opinion that, by a little more patience and perseverance in the old mine, we shall meet with great success, gains ground daily; and I have not the least doubt, I shall soon have to communicate to you something good. We have I think just touched the lode in the deep level at Osborne's; I was underground there last evening, and find a great alteration in the ground, with a great deal more water coming out of the end, with a little gossan, &c.—as soon as any alteration for the better here, I will let you know. We shall get carried to Cheadle this week from 12 to 15 tons of ore more, so as to sample, I hope, by Monday next. As this is a peculiar country, and subject to great bunches with very little warning, no one knows how soon we may make a good discovery; or how near we are to it; that we shall do so I am satisfied, and for my own satisfaction, I have requested Capt. Bonsall, who is a very able miner and a respectable man, the manager of the adjoining mine, Clayton, to go underground, see what we are doing, and write you his opinion also, he having been located in this immediate neighbourhood during the last 40 years. The following report has been received from Captain Bonsall:—"*Clayton Mine, October* 26.—By Mr. Williams's request, I have inspected the Old Ecton Mine; and, from very careful observations, I find there are certainly three or four places which hold out excellent promises of great and good discoveries being made, by extending cross-cuts to intersect lodes that are known to exist; and from the likelihood, or, I may say, certainty, would be intersected in bearing and productive measures. I have no doubt but the result would prove highly satisfactory to the shareholders; but, as his operations are confined for the present to certain objects only, I cannot see that there is a place in the mine more likely to give speedy relief, or to meet with a bunch of ore anywhere so quick, as at the back of the 150 fm. level, above the range of spar. It is my decided opinion, that there is a large deposit of ore above that mineral. I cannot see that anything better for the present can be done than persevere there, to find where the vein makes up—which, I have no doubt, will lead to good results.

GREAT HEWAS CONSOLS.—Since our meeting in August, my report of our progressive operations here has appeared in the *Mining Journal*, in which a minute detail of the progress and general prospects was given; however, a meeting of adventurers having been convened to-day, allow me to resume the subject. The water, according to promise, is pumped out to the 36 fathom level; Stanley's shaft is clear to that depth, and east shaft also; Carthew's shaft is in course of sinking, and is intended to communicate with the proposed cross-cut from Northy's, in the 36; the ground is favourable for sinking, and, within a month from this, we expect to have sunk it 15 fms. under the adit. We have cleared up a shaft from grass to adit, east of Vivian's, and intend sinking it under the adit, on the course of Hewas lode, in the tin ground discovered by the Vivians; and, in a few days, we expect to set a pitch here. Vivian's shaft is cleared 14 fms. under adit, and a level cleared out from this shaft 15 fms. east, which has opened up a great deal of kindly unexplored tin ground. We have been actively engaged removing rubbish and securing the levels in various parts of the mine, to make pitches available; and have already engaged 30 tributers to work at very moderate tributes—viz.: 6*s.* 8*d.*, 8*s.*, 10*s.*, 11*s.*, and 12*s.* in the 1*l.* Other pitches are already applied for; and, after clearing the 36, &c., the number of tributers will be greatly augmented—so much so, that we hesitate not to say that, before the next two-monthly meeting, we shall have upwards of 60 tributers at work. We are highly pleased with general prospects. In the bottom of the 24, east of Stanley's, in the pitch worked at 6*s.* 8*d.*, the lode is 4 ft. wide, and worth about 30*l.* per fm.; in a pitch, west of this, in the same level, the lode is worth from 12*l.* to 15*l.* per fm.; and in a pitch, west of the footway, in the 24, the tributers made a discovery of tin on Saturday, worth from 18*l.* to 20*l.* per fm. The pitches named are situated in whole unexplored ground; and, therefore, cannot fail of yielding good profits to the adventurers. The other pitches are looking well, and all the tributers appear quite pleased with the tributes given; therefore, the amount of work done for the present outlay, the amazing quantity of tin ground already available, the number of tributers employed, and the nature of the tinstuff drawn to grass to-day, go to prove that we have done more than we promised to do, so soon after setting the engine to work; and that we have every prospect of realising more than our most sanguine expectations could have induced us to hope.—Oct. 25.

GREAT MICHELL CONSOLS.—The lode in the sump winze, sinking below the 35 fm. level, is 5 ft. wide, composed of mundic, spar, and ore, producing some saving work. In the 35 fm. level, west of the sump winze, the lode, for the whole length of the end, is carrying abundance of mundic, with ore intermixed throughout—a very promising end.—Oct. 26.

GREAT WHEAL MARTHA.—The lode in the 40 fm. level east is 1 ft. big—1 ft. 6 in. being mundic and copper, and the remaining part spar and capel. By this increase of mundic, it appears we are not far from the shoot of mundic and ore, that we passed through in the 10 and 20 fm. levels, at the old mine. The water is now in fork to the 80.—Oct. 28.

HOLMBUSH.—The ground in the diagonal shaft, sinking below the 120 fm. level, is quite as favourable as we have ever seen it, being a white killas strata. In the 120 fm. level, west of the great cross-course, we believe we are through the slide, and shall at once commence driving south, to intersect the caunter part of the lode, which, no doubt, we have in that direction, agreeable to the heave in the upper levels. The lode in the 110 fm. level south is 20 in. wide, producing stones of lead, and at present has a kindlier appearance, the underlie of the lode being much less than heretofore. The lode in the 100 fm. level south has not been taken down since last reported on; we are driving south on the eastern side of it for some distance, after which we shall break the lode to itself; the strata is white killas; there is a little water issuing from the end, which makes us think we are getting near the flap-jack lode, especially as the level has been very dry for the last 20 fms. driving; and, agreeable to the dialling, we are within a few fathoms of it, supposing the great cross-course had acted on this lode as it did on the other, but which as yet remains a secret; one of the pitches in the back of this level is producing a fair quantity of lead; the other pitch at present is rather poor. The lode in the 90 fm. level south is 2 ft. wide, producing stones of lead, ground favourable. We would likewise beg to inform you, we are preparing a small parcel of lead ore for the market as quick as possible.

KIRKCUDBRIGHTSHIRE.—In the 50 fm. level west we have not been able to do anything since my last, as these men have been engaged fixing timber, with a view to connect the railway from the 40 to the 50 fm. levels. The lode in the 40 fm. end is large, but rather poor; we have cross-cut north at this point, and consider that we have the caunter; we have not yet discovered the north wall, therefore we cannot ascertain the full value of the lodes—the part which we have seen produces about ¼ ton per fm.; the stopes, in the back of this level, produce about ¾ ton per fm. The lode in the 30 fm. end west is 4 to 5 ft. wide, producing 1¼ ton per fm.; we have discovered a parallel branch of lead in this level north, worth about ¼ ton per fm.—some men are engaged stripping down this branch; the rise, in the back of this level is rather poor, expect to be holed to a winze in the bottom of the 20 in the course of the coming week; the stopes, in the back of this level, look much the same as last reported; the same will apply to those under the level. In the 20 fm. end west the lode is 3½ to 4 ft. wide, producing stones of ore; the stopes, in back of this level, are not so good as last reported, worth now about ½ ton per fm. At Keith's shaft, we are driving south on face of the rock under the till, or gravel, but have not succeeded as yet in finding the lode.—Oct. 23.

LAMHEROOE WHEAL MARIA.—At length we have cut through the K lode, and I have been enabled carefully to examine it, and beg to send you my report of the same. In driving our cross-cut north, we drove upon a small cross-course, which has completely divided the lode, and slightly disordered it. It is, however, a large strong lode, with very kindly indications; and, as soon as we shall have extended on it a little way from the cross-course, we may, I think, expect an improvement. We have not yet been able to extend on it, in consequence of a great influx of water, arising from the late heavy rains, by which the lower grounds of our mine were completely inundated for several feet deep. A similar inundation has not occurred for the last fourteen years; and our engine was driven 9 strokes per minute; and it was only last evening that the men were enabled to resume working. But for this untoward circumstance, we should have extended on the lode, a little distance from the cross-course, where it will be in a more settled state; and I should then be enabled to speak more decidedly as to its appearances and prospects. This, however, we shall now soon do. I have put the men to drive on it, and shall push it with all possible despatch. The circumstance, however, of its letting down the water is not an unfavourable symptom; and should it, as I confidently anticipate it will, drain the workings in the orchard, we may resume those workings, where, from its present beautiful appearances, and probable junction with one or two more lodes, we may, I think, anticipate speedy and profitable returns. Our bottom level will also come 22 fathoms below the present workings; if, therefore, at that depth the lode should prove productive, as its present appearances would lead us to expect, it will lay open a large and valuable piece of ore ground, which could be taken away at a small expense. I hope, however, to be able to speak more positively on this point shortly. The L lode, in the south cross-cut, is not sufficiently promising to warrant any outlay at the present moment; and I, therefore, purpose putting the men to drive south from the bottom of the engine-shaft, to intersect the large and promising E lode. The distance to drive is somewhere about 16 or 18 fms. It would, also, be very desirable to continue the cross-cut, north from the K lode, to intersect the H and J lodes, which are underlaying south towards the K lode; but, in the absence of any authority, I cannot presume to increase our cost so seriously at the present moment. I shall watch the progress made upon the K lode; and, as soon as we shall have made sufficient progress to form a decided opinion of its character, &c., will write you again.—Oct. 27.

LOSTWITHIEL CONSOLS.—The operations at the mine are steadily progressing, after one or two interruptions previously referred to. We have cut a plat, in order to deposit the stuff from the shaft, prior to hauling it to surface by whim; by this means we dispense with three labourers, and hire a horse one-third of the day. We have erected the shears and capstan, and made every other arrangement at surface necessary for permanently sinking the shaft, &c.; the ground is hard at present, and the price is 20*l.* per fm., set till the end of the month—I fear the men will hardly be paid at that; they are working with considerable diligence and spirit; we hope that, after passing through this floor, we shall find the ground easier. The captain has extracted some samples of ore from the back of the adit, which have been assayed, and produced (as reported to Mr. Crofts) 273 ozs. of silver per ton, value 56*l.* 15*s.*, or thereabouts; I have mentioned this, merely as an indication of the truth of what has before been advanced—that we have a fair prospect of a deposit of riches under this adit, sufficiently so to warrant our efforts to reach the point under such indications. We have also met with a fifth east and west lode in the adit; it contains spots of copper and other indications of mineral. We have now five east and west lodes within the space of 55 fms., and intersecting the caunter lode, on which we are driving; there could not be a more reasonable chance of a paying mine; three of these five lodes are very kindly, and either of them would warrant the outlay to explore it.—Oct. 26.

MENDIP HILLS.—The appearance of the lode in the 38 fathom level, south of Stainsby's shaft, continues much the same as last reported on, being about 2 ft. 6 inches wide, composed of flookan, white spar, and small cubes of lead at times—ground rather harder for driving than it has been; in the winze sinking below this level, we are down about 16 fms., and at which point the lode is 4 ft. 6 in. wide, composed of soft white flookan, spar, and iron, intermixed with particles of lead in places. In the slag department, but little has been done during the past week in the trench opening across the valley, mentioned in my last report—as the greater part of the men have been employed in cutting ground for the tram roads, &c. I am glad to inform you we are progressing very favourably with the engine; the boiler is also fixed in its place; and the masons are at present engaged building the walls of the house, &c.

SILVER VALLEY.—The engine-shaft is near being sunk 9 ft. under the 50 fm. level, and the shaftmen are about to commence cutting cistern, plat, putting in bearers, &c.; the ground in the shaft continues still favourable for sinking; the north branch of the tin lode, in the 50 fm. level end east, is 1 ft. wide, containing a little tin; in this level west, near the end, we are cutting in north, supposing there is another part of the lode there, as water is proceeding therefrom. At the silver mine, the lode in the 20 fm. level end west is 1 ft. wide, consisting of flookan and mundic; the lode in the rise, in the back of this level, is 20 in. wide, composed of flookan, friable spar, mundic, and iron; the lode in the stope, in the bottom, consists of flookan and mundic, with a regular branch of carbonate of iron; but, at present, produces but small portions of silver. The lode in the 30 end west is 20 in. wide, and easy to drive on; but chiefly composed of hard mundic, quartz, and iron, which contains small portions of silver.—Oct. 27.

SOUTH FRIENDSHIP.—I have been underground in the above mine this day, and feel justified in stating that the lode in the bottom end, which is the 52 fm. level, has a very promising appearance; it is all 4 ft. wide, underlaying about 2 ft. in a fm., and is composed of felspar, fluor-spar, carbonate of lime, blue peach, large rocks of mundic, and good stones of copper and lead occasionally; I call it a very kindly lode, indeed; and we hope shortly to commence sinking, as there is every indication visible to expect (at the deeper levels) abundance of copper. In the cross-cut south, in the 28 fm. level, we are frequently intersecting small branches of prian and bright yellow copper, coated black, which very much resembles that of the lode (we are driving to cut) which we discovered in the lobby; those branches are gone down nearly perpendicular, which must ultimately fall into the lode in depth, as it is underlaying about 3 ft. in a fm. towards them; the strata is of a beautiful light blue clay slate, and the price for driving is 1*l.* 15*s.* per fm. We have about 25 fms. farther to drive, before we expect to cut the lode, and there is every reason to expect some profitable results will be realised in the above level.—Oct. 28.

SOUTH WHEAL MARIA.—The lode in the 20 fm. level, west from the engine-shaft, is about 2 ft. big, and continues to yield some good stones of ore. We have driven about 10 fms. west, and suppose we are now to within a few feet of the caunter lode, where we hope to find the ground more favourable for driving. The ground in the cross-cut north, in the 20 fm. level, is without any alteration. We have not yet cut the lode running into our sett from Wheal Williams's, which they have there in their flat-rod shaft, but we are still costeaning for it.—October 28.

SOUTH WHEAL TRELAWNEY.—Snell's engine-shaft is in course of sinking, with nine men, down in the 16 fms. under adit; ground still favourable; water increasing a little.—Oct 25.

TAMAR SILVER-LEAD—In the engine-shaft, the lode is 6 inches wide, composed of flookan and ore, looking well. In the 160 end south no lode has been taken down since last report: in the same level north the lode is 2 ft. wide, composed of capel and ore, but not rich. In the 145 end south the lode is 2 ft. wide, yielding good stones of ore; in the same level north the lode is poor and unproductive. In the 125 end the lode is 15 in. wide, producing saving work. At the north mine, in the 70 end, the lode is 2½ ft. wide, coarse in quality. In the winze, sinking from the bottom of the 60, the lode is 4 ft. wide, with branches of ore; we have suspended the 60 fm. level north in order to sink a winze for ventilation. The walls for the whim-engine house will be well up this week, if the weather continues favourable.—Oct. 25.

TINCROFT.—The lode in the 100 fm. level, east of new engine-shaft, is 4 ft. wide—2 ft. on the north side saving work; the lode in the west, in the same level, is small, with some good stones of ore. The lode in the 90 east is 4 ft. wide, producing some good work for ore, and very promising; the lode in the 90 west is 2 ft. wide, producing one and a half ton of ore per fm., worth 5*l.* per ton; the eastern stopes, in the bottom of the 90, are worth 20*l.* a fm.; the western stopes, under the same level, are worth 10*l.* per fm.; the stopes, in the back of the 90, are worth 8*l.* per fm. The lode in the 80 east is 2½ ft. wide, saving work for tin; we have suspended the 80 west, and have a pitch in the back of the level at 7*s.* 6*d.* tribute. The lode in the winze, sinking below the 70 west, is 2½ ft. wide, worth 10*l.* per fm. On the whole, I think the north mine is looking better than when I reported last. At Palmer's, we are opening a plat in the 80 fm. level, in order to commence sinking below that level again as soon as possible; the lode in the 80, west of Palmer's, is 3 ft. wide, worth 10*l.* per fm. The lode in the winze, sinking below the 70, is 2½ ft. wide, worth 6*l.* per fm.; we are driving from the north lode on a cross-course, to cut the south lode, in this level (70)—ground favourable; we expect to cut the said lode this month; the lode in the 70 west is 4 ft. wide, orey throughout, worth 15*l.* per fm.; the stopes, in the back of the 70, are worth 18*l.* per fm. The lode in the winze, in the bottom of the 60 east, is 4 ft. wide, wurth 12*l.* per fm.; the lode in the 60 west is 2 ft. wide, producing some ore, and kindly. The lode in the 48 west is 15 in. wide, worth 6*l.* per fm. The pitches continue much the same as for some time; and we are glad to say, this part of the mine continues to look well. At the south mine, in Highburrow lode, the tributers, in the bottom of the 152, continue to get fair wages at 10*s.* tribute. The 142 end, the rise in the back of it, and the winze sinking on it, continue to produce fair quality tinstuff; we hope to communicate the rise with the winze this month. The lode in the 120 east is 4 ft. wide, worth 15*l.* per fm. The winze, sinking below the 110, is worth 20*l.* per fm. The stopes, in the back of the 120, are worth 12*l.* per fm. The stopes, in the back of the 110, are worth 15*l.* per fm.; we are looking better on this lodethan for some time past. Chapple's lode is still producing good work for copper ore from the stopes and pitches; the ends are producing some ore, and kindly. At Wheal Providence we have secured the engine-shaft to the 12 fm. level, have opened a plat, and have cleared the shaft 12 ft. below the 12 fm. level; we have set one pitch, in the back of the 12, at 10*s.* from 20*l.* The ground in the adit, towards Stainsby's shaft, is a little more favourable than it has been.—Oct. 25.

TRELEIGH CONSOLS.—Christoe's shaft, below the 110 fm. level, is sinking in the country. In the 110, east of ditto, we are driving east on a branch 6 in. wide, in disordered ground, and but little ore; the 110, west of ditto, lode 15 in. wide, is in a westerly direction, with stones of ore, mundic, and spar. In the 100, east of Garden's, lode 2½ ft. wide, with a small quantity of ore, more promising than last week; in the 100, west of ditto, lode 2 ft. wide, with rather a kindly appearance, but little ore. In the 90, west of ditto, lode 2 ft. wide, producing good stones of ore, at present not to value. In the 80, west of ditto, lode 2 ft. wide, worth 10*l.* per fm.; in the rise, above the 80 west, lode 10 in. wide, worth 10*l.* per fm.—this is much altered in the week past; in the 80, east of ditto, lode 18 in. wide, but very little ore. In the winze, below the 70 west, we have commenced a winze to-day, which will be sunk on the rise in the back of the 80 fm. level. In the 60, west of ditto, lode 2 ft. wide, worth 6*l.* per fm.—this is still a kindly end. In the adit cross-cut, at Wheal Parent, the ground is favourable. The new shaft for Wheal Parent is sinking in the country, 12 fms. 2 ft. below the surface.—Oct. 29.

WEST WHEAL JEWEL.—In the 57 fm. level, east of Williams's cross-course, on Wheal Jewel lode, lode 15 in. wide, worth 4*l.* per fm.; in the 57 fm. level, west of Williams's cross-course, on the same lode, lode 18 in. wide, with very promising appearance, producing good stones of ore. In the 30 fm. level, west of Quarry shaft, on Tolcarne tin lode, lode 20 in. wide, worth 5*l.* per fm. In the 12 fm. level, west of Quarry shaft, on the same lode, lode 2 ft. wide, worth 6*l.* per fm. In the deep adit, west of Quarry shaft, on the same lode, lode 20 in. wide, worth 10*l.* per fm.; in the shallow adit, west of Quarry shaft, on the same lode, lode 2 ft. wide, worth 4*l.* per fm. In the stopes, in the bottom of the deep adit, east of Pryor's winze, on the same lode, lode 4 ft. wide, worth 35*l.* per fm.—Oct. 25.

WHEAL ADAMS.—Having cut a stream of water in the rise in the 50 fathom level, we have suspended operations whilst it is being drained, to obviate the necessity of fixing large timbers, which would otherwise be required, and which, owing to the peculiar nature of the ground, would materially retard our progress; we expect to resume the working in this part in the course of the week. The middle lode continues to produce a fair quantity of black jack, with galena disseminated through it; but we have not yet met with another deposit of brown blende; and we calculate, from the indications, that a large quantity of this mineral will not be discovered in the ground we are exploring. The stopes in the quartzose lode, between the 40 and 50, are worth 8*l.* per fm.; in the back of the 40 they are worth 5*l.* per fm.; tribute pitches are being set on other parts of this lode. The lode in the 18 fm. level has been taken down; and, although it consists mostly of gossan, it presents favourable indications, and we doubt not that, by further explorations, good results will be obtained. We propose sampling and weighing the brown blende, computed 108 tons, this day.—Oct. 26.

WHEAL BENNY.—Owing to the late heavy rains, we have a considerable increase of water for the water-wheel; and, although the Tamar rose so high as to fill the shaft, and we were delayed some days in drawing it out, we are now enabled to resume the driving cross-cut north. Should the water continue, of which there is every probability, we hope to cut the lode in six or seven weeks; the south cross-cut is progressing as usual.—Oct. 27.

WHEAL TRELAWNEY.—We have again resumed sinking Phillips' shaft, where the ground is good for sinking. The 52 fm. level north is not altogether so good as last week, but there is still a splendid lode in the end; the same level south is improving, worth at present 12*l.* per fm. The 42 fm. level south is nearly the same as last reported; this level north will produce about a ton of ore per fm.; in the winze, sinking under this level, the lode is much better than last reported, worth at present 15*l.* per fm. In the 32 fm. level north we are opening ground that will pay well for stoping. We have no material alteration in Trelawney's shaft, or the 22 cross-cut east. At Vivian's, we are driving from the bottom of the winze; the lode is worth about 12*l.* per fm. We intend sampling, on Wednesday, the 27th inst., about 78 tons of silver-lead ores.

FOREIGN MINES.

ST. JOHN DEL REY MINES.—*Morro Velho, Aug.* 18.—Gold extracted to date, 5316 oitavas—viz.: 5142 oits., from 267·47 cubic feet mixed sands = 19·22 oits. per cubic feet; 174 ditto ditto coffers of Lyon stamps = 5316 oits. The supply of stone on the spalling floor is abundant. Mr. Smyth is, in consequence, rather freely rejecting the inferior ores.

New Pitwork.—I am glad to inform you, that the new pitwork for the Gamba has been let down that mine, and completed yesterday; it works admirably, and does great credit to Capt. Goyen and the men under him, who worked at it for 32 hours consecutively. In about 10 days a similar operation will be undertaken at the Bahu sump; but that will be of a much more difficult nature, on account of the greater depth of the mine, and the greater length and weight of the pumps; and I have promised a supper to Captain Goyen and his assistants, if they succeed in altering the Bahu pitwork in as satisfactory a manner as they have done at the Gamba. As it is, the old Bahu pitwork occasions us continual trouble and stoppages; at this moment the water is in there, and has been for the last 12 or 14 hours, in consequence of one of these breakages.

Western Extension.—Our hopes improve—we have already come upon undoubted traces of old workings.

IMPERIAL BRAZILIAN MINES.—*Bananal, August* 18.—I have nothing to add to the postscript of my respects of the 13th inst.; the vein continues small, but is still very promising, and is spotted with gold throughout. Owing to the drought, and the want of the new rego, now in progress, our surface water is barely enough to command that underground: we have, therefore, been able to do but very little to the vein since my last; but every bit we have extracted is *goldy*—though not so rich as it was a few days ago. Our hopes and expectations are as firm and sanguine as they ever were.

CARADON UNITED MINING COMPANY.

A general meeting of shareholders was held at the offices, St. Michael's-alley, Cornhill, on Wednesday, the 27th inst.—GEORGE MACKAY, Esq., in the chair.—The meeting was very numerously attended, and Capt. Penrose, the agent of the mine, being present to explain the nature of the operations—and some promising stones of ore, of the same nature as seen at South Caradon, having been broken in the 28 fm. level—it was determined to drive upon the lode in that level, and to get down the engine-shaft as fast as possible to the 40 fm. level. To carry out these objects, a call of 2*l.* per share was made.—A long discussion took place upon the fact, that the lord of the mine, after receiving a large premium for the sett, has steadily refused to pay the calls upon his shares. The general feeling of the meeting was one of indignation at such conduct, and a resolution unanimously entered into, to enforce payment of the same by every legal means.—The following accounts were presented, and passed:—Balance at banker's, July 28, 24*l.* 2s.; calls received since 28th July, 380*l.*; other cash, 50*l.* = 454*l.* 2s.—Cost for July, 72*l.* 7s. 1d.; ditto August, 22*l.* 3s. 10d.; ditto September, 73*l.* 4s. 9d.; merchants' bills paid, 188*l.* 11s. 11d.—426*l.* 7s. 7d.: balance in hand, 27*l.* 14s. 5d.—The following is the agent's report:—"With mingled feelings both of regret and pleasure, I have to present you my report of this mine. When I look at our many disasters, occasioned by so many troublesome runs which have so frequently followed us in the engine-shaft, and have so greatly impeded our progress of sinking, without loss of life, is cause of much gratitude. At the commencement of this month, I set to the men to sink 5 fms., at 20*l.* per fm., and in 10 days we sunk 6 ft., having pot granite in the south of the shaft, and hard granite to the north; I expected we should have sunk the 5 fms. in two months, in consequence of such pressure of water and air in the excavation above, occasioned by former runs; we again on the 7th inst. had another run, which threw 7 ft. of stuff in the shaft; after succeeding in clearing this, and putting in extra timber, the water again broke in on us, which again crushed the timber, and at present prevented sinking; I then thought it advisable to sink a new grass shaft, to hole to the run, which I expect to accomplish for about 12*l.*, and it will be completed. I expect, in a week or two, when I intend to fill up from surface, and make all secure; I trust after a while we shall again be able to resume the sinking of the shaft. In the 30 cross-cut south we intersected Morsheid's lode, which was split in branches, occasioned by pot granite; these branches are from 4 in. to more than 2 ft. wide, composed of gossan, flookan, prian, iron, and portions of grey, black, and yellow copper ore, and have every reason to believe this to be a most promising and a productive lode, when freed from pot granite. In the 28 south we also cut this lode and branch, which made a similar appearance as in the 30; about 3½ fms. south of this we intersected two tin branches, one 2 in. wide, the other 4 in. wide; these are about 7 ft. apart, and likely to form a junction a few fathoms in depth; from their appearance, I have reason to believe them to be a distinct lode, and productive for copper ore in depth; about 4½ fms. south of these we intersected a copper lode, 2 ft. wide in the bottom of the end, and about 1 ft. wide in the back, split by a horse of granite; about 10 days ago I put two men to drive east on it, at 4*l.* per fm., and have the pleasure to say this lode is much improved as to size and appearance; it is still split, the horse is about 1 ft. wide, the lode is now nearly 3 ft. wide, from wall to wall, composed of peach, quartz, mundic, prian, can, and good portions of yellow copper ore; 10 ft. south of this, we cut another branch, 4 in. wide, composed of rubbled spar; this branch is likely to fall in with the latter lode, about 5 fms. to the east, where I think it will make a most promising appearance. We are now driving the 28 south by six men, at 16*l.* per fm.; still in a hard elvan course, but hope soon to get through it; think it advisable to continue this level, as we have several very promising lodes before us, which we have seen to the surface. Now, I trust, by diligence and perseverance, we shall soon get through our difficulties, and still entertain good hopes we shall, by-and-bye, have a good mine."

DARTMOOR CONSOLS MINING COMPANY.

A meeting of shareholders was held at the offices of the company, Lombard-street, on Thursday last, the 28th inst., pursuant to notice.

EDWARD HOLMES, Esq., in the chair.

The SECRETARY read the notice of meeting, which was followed by the captain's report, who was present, and entered into a satisfactory explanation of his proposed plan for perfecting the operations commenced.—The SECRETARY also presented his statement of accounts, explaining the manner of the expenditure of the moneys received for the number of shares sold.—The number of shares, as at first contemplated, not having been taken up and paid upon, a discussion ensued as to the propriety of prosecuting the mine with the number actually subscribed for; and, although considerably less than the number proposed in the prospectus of the company, it was considered by some of the shareholders present, that the company would be perfectly safe in carrying on the adventure with a less number. Still some disappointment was manifested at finding the whole had not been taken up, as had been considered, which ended in an adjournment of the meeting to the 11th of Nov., to be held at Cogges hall, Essex, where, it appears, the majority of the shareholders reside; and, in the meantime, a deputation should visit the mine, and report at the next meeting.

MINE CAPTAIN'S REPORT.

Oct. 28.—I beg to inform you, that we are all but in readiness to commence with walling the wheel-pit up; we hope to begin on Saturday, if possible. The carpenters are erecting bobs and pulleys, and working up the necessary timber for the wheel; the launders are completed, to carry the water over the wheel. The smiths have been working by day and night, to finish some portion of the iron work, for the carpenters to get on with the wheel; and now the smiths are altering, putting joints, &c., to horizontal rods; here they have a deal to do, to complete such a long run of them. At Henry's engine-shaft, we are, I am happy to inform you, going on well; indeed, we are down 10 fathoms, and if things go on well, as we hope they will, this shaft will be down the depth of the shallow adit, in the course of two or three weeks; and I hope to see it there in a fortnight. We have necessary timber here to do most of the work, with the exception of a long piece of balk—or it may require two—for the wheel-pit.

REPORT OF CAPTAINS PASCOE AND GREGORY.

We have cleared and secured Two Brothers' adit, which is upwards of 300 fms. in length, collared and secured all the necessary shafts, new roofed the blacksmith's shop, built a new timber house, completed and repaired the mansion-house, put two cot houses in good repair, took abroad the old engine-wheel, dammed and secured the roads leading to the mine, repaired the carpenters' shop and stable, driven up a lobby, to unwater the wheel-pit about 70 fms., sunk the wheel-pit 30 ft. deep, 60 ft. long, and 17 wide, cut all the stones and brought them to the pit in readiness to build, cut all the timber and completed the wheel, such as buckets, arms, &c. &c., so far as it is possible to go before the axle is in its place, brought sufficient timber, with the exception of two loads, to complete our operations, as well as sufficient iron, with the exception of about 50 fms. of flat-rods, erected a new capstan, shears, and whim, repaired up the bob pit connected to Pryce Deacon's shaft, repaired the bob and its connections, sunk 6 fms. of Henry's shaft that is gone down between two rich bunches of tin, cut and repaired all the leats upwards of a mile in length, cut and sawed our winter's stock of turf or fuel, and many other jobs which I need not mention—the cost of which to the end of October, 630*l.*; and, our liabilities for timber, iron, steel, lime, coals, slate, new whim rope, new 40-inch smith's bellows, anvil, vice, screw, stocks, handscrew, new tops and plates, and all other necessary materials except a capstan rope and small lift of pumps—will amount to about 250*l.* I find our total expenses to the end of September will amount to about 800*l.*; our next three months' expenses will amount to about 100*l.* per month, the amount of which is 300*l.*—that is to employ sufficient hands; and by that time we shall get our large wheel up, and at work. The money that is necessary to clear off our liabilities to the end of September, and pay the labour part for the next three months, will amount to about 530*l.*, so near as I can judge. I stated in my former report that 2000*l.* would be sufficient to erect all necessary machinery, and bring tin in the market, and I do most positively state that I shall not exceed that sum; I do really believe that the mine is well worthy of their notice, and will ultimately amply reward the adventurers for their outlay.

WHEAL MARY MINING COMPANY.

A meeting of shareholders was held at the account-house, on Wednesday, the 13th Oct. The accounts, having been examined, were allowed—it appearing that a balance of 17*l.* 6s. 1d. was due from the purser. In consequence of Mr. Pickworth, of Throgmorton-street, having disowned ever having been an adventurer in the mine, the shares standing in his name were thrown over the book. A call of 1*l.* per share was made.—The following report was read to the meeting:—"Our engine-shaft is now nearly completed to the 40 fm., immediately on which we shall proceed to fix our plunger-lift, and, by the latter end of the ensuing week, we shall have our machinery in good working condition to fork the water under that level. The cross-cuts, driving in the 40, are in about 7 fms. each from the lode; the north cross-cut is still in the elvan, and the south in killas—the ground in each still continuing favourable. In the back of the 40 fm. level we have one tribute pitch set at 10s. in the 1*l.*, two in the bottom of the 30 fm. level at 13s. in the 1*l.*, and one in the bottom of the 20 fm. level at 18s. in the 1*l.* Chadwick's shaft, on Wheal Parent lode, has been sunk about 10 fms. below the adit level; the lode in the shaft is at present small and poor. The winding engine will be ready to work in three weeks' time, and we are getting Trestrail's shaft in, in order for drawing."

WEST WHEAL MARIA MINING COMPANY.

At a special general meeting of adventurers, held at the mine, on the 23d inst., Capt. Rodda's report of the state and prospects of the mine was received and entered, and the meeting approved of Capt. Rodda's driving the 54 fathom level east, under the ore ground discovered in the 38 fathom level, with all possible dispatch.—The accounts were produced by the purser, showing, when all calls are paid up, a balance of 493*l.* 17s. due, to the end of August, against the mine, and which were referred to Messrs. Daw, Ward, and J. Browne, to be audited; and the purser was directed to take such measures to recover the arrears of calls due from shareholders, as he may think proper, at the expense of the adventurers, and either in their name, or in that of any merchant, for materials supplied to the mine.—Messrs. Stephen Trehane and J. Browne, of Tavistock, were elected members of the committee of management, in the place of Messrs. Phillips and J. Skinner.—A letter from Capt. James Richards was read, promising to give up possession of Capel Tor Cottage very shortly. The purser was directed to make arrangements with Capt. Richards, for immediate possession, if possible, and for any allowance to be made to him therein, by giving up the arrears of rent, &c., as he may think proper.—A call of 5*l.* per original, or 10s. per 2560th share, was made, to be paid to Messrs. Harris and Co., Naval Bank, Plymouth, the bankers of the company, before the 10th of November; in the mean time, the purser is to overdraw on the banker for the monthly costs and merchants' bills, so far as the liabilities of the mine may require, and the bankers may approve. A special general meeting of the adventurers is to be held at the Bedford Hotel, Tavistock, on Saturday, the 27th November, to consolidate, alter, and amend the rules and regulations of the mine, if that meeting shall think fit; and the purser was requested to prepare such consolidated, altered, and amended rules and regulations for the meeting, and to transact such other business, relating to the mine, as may be required.—Capt. Hamley, of Wheal Williams Mine (appearing as proxy for Lieutenant Tom), having been requested by the meeting to inspect the mine, and report on its state and prospects, came up from underground with a full corroboration of the following from Capt. Rodda:—"The eastern engine-shaft has been sunk about 12 feet; in the present bottom of which, the lode is about 3½ feet wide, producing very good stones of ore, and presenting every indication of further improvement. In the 38 fathom level west, the lode is altogether 5 ft. wide—a very fine strong-looking lode, producing splendid ore; the middle portion of which, for about 9 in. wide, is good saving work. This discovery I consider to be the most important, by far, of any that we have made since the commencement of the company's operations; and it warrants the belief, that it will now forthwith continue to improve considerably; and also it is hoped, before long, that the ground in question, now in course of being laid open, will prove a source of permanently profitable returns. In this level, we have cut plat, driven about 11 fms., divided and cased the shaft about 7 fms., cut bearer holes, put in bearers and cistern, fixed the 6-in. lift, put down one piece of main-rod and stays, put in penthouse, &c., &c.; in the western engine-shaft, we have sunk in all about 3 fms., at which we intend to cut bearer holes and put in bearers and cistern, and to fix an 8-in. lift. In our present bottom level (the 64), we have cut plat; and in cutting which we have stripped down the lode, and found it to be about 8 ft. wide, composed principally of capel, spar, mundic, and a little ore in places. In the 54 fm. level, east of this shaft, we have driven about 6 fms.—the lode in the present end being about 5 ft. wide, composed of capel, spar, mundic, and spots of ore; the cross-cut south, in this level, we have driven about 7½ fms., for the most part in rather hard ground; in this level, we have intersected a branch of ore from 2 to 3 in. wide, of very rich quality; and from the present indications, of somewhat improved character of ground, and increase of water, I think we are not far from the lode, for which this drivage was undertaken. In conclusion, I cannot but congratulate the adventurers on these important improvements, referred to in the foregoing report, more especially the one in the 38 fm. level, west of the eastern engine-shaft, from which there are fine samples of ore before you, in evidence of the satisfactory character and quality thereof."

WHEAL TREMAYNE.—A meeting of the adventurers was held at the mining offices, George-yard, Lombard-street, on the 12th inst., when the statement of accounts was submitted and passed, as follows:—By sale of minerals, from 12th August to 9th October, 242*l.* 3s. 5d.; by West Wheal Providence adventurers, towards draining the 20 fm. level, as per agreement, 5*l.*=247*l.* 3s. 5d.; from which deduct lord's dues, 12*l.* 1s. 2d., leaves total receipts, 230*l.* 2s. 3d.; against which are costs and merchants' bills, for July and Aug., 217*l.* 11s. 4d., leaves a balance in favour of the mine of 12*l.* 10s. 11d., which, deducted from the balance due from the mine on the last account of 62*l.* 6s. 10d., leaves a balance still due of 49*l.* 15s. 11d.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

BULCH CONSOLIDATED.—We are glad to find, from reports lately received from the agent, that the prospective advantages calculated upon in the late reports are likely to be not only borne out, but exceeded. By the report, received under date the 16th inst., it appears that in the stope, in the eastern ground, in the 15 fm. level, it is calculated that six men will, in the month, break 300*l.* worth of ore. The western part of the mine is reported on as exceedingly good; and there is a fine course of ore in the engine-shaft, now about 4 fms. down under the 15 fm. level. The surface-work, with the view to dressing, is getting on, "but it necessarily requires much time to get a mine of such magnitude." There is also in the western part of the mine, in the old workings, a fine course of ore, worth from 30*l.* to 40*l.* per fm. From a report subsequently received, under date the 20th inst., it appears that, "with respect to the prospects of the mine, nothing can be better; we do not compare unfavourably with Gogman (the adjoining mine). We have an excellent course of ore for 10 feet, of the width of the lode in the eastern stopes; and our ore 'floors' make a much better show—bringing out nothing but large rocks of ore; and, if our machinery and surface works were at this moment sufficiently extended, we should so far increase our returns as to equal, if not exceed, the returns of our neighbours. The engine-shaft is in a fine course of ore the whole width of the shaft (say about 12 feet); and the ore in the western stopes is very large and good." From a report, under date the 22d inst., we make the following extract:—"We commenced to make clean ore yesterday, and believe we can return 2 tons a day with our present machinery; but it will be necessary to extend our surface works, so as to dress the ores with more dispatch. There can be no doubt but that the returns monthly would be full 120 tons, if not exceeding that quantity; but we shall require more dressing power—which we are proceeding with."

EAST ALVENNEY.—Since my last week's letter, we have made another very important discovery upon this mine. We have cleared up the old bottoms in another lode, about 6 fms. south of the central lode, where our shaft is going down, and have come upon the back of a splendid looking lode, about 2 ft. wide—it is my opinion, this lode will be equally rich with the central lode. The lode in the shaft still continues equally fine, certainly worth 60*l.* per fm. in sinking.

TREMAYNE.—We are given to understand, that a tin lode has been discovered standing whole to surface. It appears that, in the old workings (the "old men" having driven on the side of the lode 40 fms. in extent), the lode is represented as being worth 7*l.* to 8*l.* per fm.

WEST WHEAL PROVIDENCE.—This mine is progressing favourably, and the tin lode holds out good prospects.

ACCIDENTS.

Seaton Delaval Colliery.—Mr. G. Bower, farmer, Hartley, was run down by a locomotive engine, whilst crossing the railway to fill a cart of coals at the colliery.

Bradley Moor Stone Pits.—Two men went to seek for work at Bradley Moor Stone Pits, which are under the superintendence of Mr. George Woodcock, the butty; and, not finding him there, one of them went down the shaft, taking with him a little boy, son of the butty, to point out the doggey. Being told he could not get employment, he ascended the shaft again, taking the boy with him; and when at the top the man got on one side of the skip to go down a ladder on the side of the pit frame, and the poor boy, in attempting to follow the example, stepped out on the opposite side, when, shocking to relate, he missed his footing, and was precipitated to the bottom of the shaft, a distance of 60 yards.

Fire at the Colliery of Messrs. Spencer, Bertram, Parkinson, and Sinclair.—Between seven and eight o'clock the engine-house of the colliery, situated at Elswick, was discovered to be on fire; and the engines from the barracks, and those from the Newcastle fire offices, were quickly on the spot, and got to work—there being plenty of water, the fire was quickly extinguished. The origin of the fire has not at present been ascertained.

Porto Bello, Wolverhampton.—W. Bandaford was killed by a quantity of "clod" falling upon him, while at work in Mr. John Barker's colliery, at Bunker's-hill.

Fatal Colliery Accident.—Mr. Robert Moore, manager of Sir George Grant Suttie's collieries at Preston Grange, met with a severe accident, which terminated fatally on Sunday evening. He had been giving instructions to the engine-man, and on his way from the engine-house, crossing the top of the boiler, he slipped his foot, and fell into the ash-pit, into some water which had just been run off the boiler, and got himself severely scalded, besides his left arm broken, and otherwise bruised. Drs. Moir and Scott, from Musselburgh, were in almost immediate attendance, but their services were of no avail; he lingered on till Sunday evening, when death put an end to his sufferings. Mr. Moore came from the North of England about 20 years ago, and since that time has resided in the district. He was a man of superior attainments, thoroughly versed in his profession, and introduced many improvements in ventilation, &c., into the collieries of this neighbourhood. The first metal-tubbing in Scotland, for stopping back water in pits, was put in under his immediate superintendence at Preston Grange Colliery in 1829, and he applied it again successfully in 1831 at Tranent Colliery, in restoring the water for supplying the town of Tranent, which had been drained in sinking one of the pits of that colliery. His loss will be much felt and regretted in this neighbourhood, where his quiet and unobtrusive demeanour gained him many friends.—*Correspondent.*

Wingerworth Iron Company.—On Saturday night, between the hours of 7 and 8, a most shocking accident occurred to a labourer in the employ of this company, named George Holmes. It appears he had laid a piece of timber across the rails to spray some empty waggons, and proceeded forward with them, incautiously allowing it to remain; the consequence was, that on returning down the incline to the blasts with a train of loaded waggons, six of them were thrown off the rails. Holmes being on the first of the waggons, was thrown under the wheels with awful violence. When taken up, it was found that his left arm was completely smashed, together with three of the fingers of his right hand. He was immediately conveyed home, and surgical aid promptly in attendance, when it was found necessary to take the left arm completely out of its socket, together with three of the fingers of his right hand.—*Derby Mercury.*

GREAT WHEAL MARTHA MINING COMPANY.

SIR,—In the last number of your Journal, which is now before me, I observe a letter on the subject of the Great Wheal Martha Consolidated Mines, purporting to be a reply to what the writer is pleased to call "an uncalled-for, unjustifiable, epistle." Now, while there cannot be the slightest doubt who the author of this strange production is, it is very evident, that although it is possible that the writer of the epistle to which he alludes may be well known to him, he is entirely mistaken as to who that individual is. Your correspondent would have us believe, that he is simply "a shareholder in this concern;" but no one at all acquainted with "this concern" will hesitate for a moment to admit, that his connection with "this concern" is likewise of another nature. The writer of the letter, an extract of which appeared in your Journal on the 2d inst., is not at all personally known to me, but I know him very well by name, and value his opinion more than that of any one connected with the Great Wheal Martha, the parties professionally engaged in which have proved themselves so ignorant of "practical mining," as to spend the funds of the company in driving so many "worthless and shallow levels," against the well-known opinions of every experienced and disinterested miner who was appealed to on the subject. I am not, Sir, a "Practical Agent," nor, like your correspondent, can I presume to the appellation of "Geologicus;" but I do flatter myself that I have some pretensions to *common sense*, and some regard for the fair representation of the opinions of even those with whom I may differ. I can easily believe that "Geologicus" should be somewhat wrath with those who boldly expose the gross mismanagement of the agents of this company, and of those who have professionally superintended them—a fact which no one but he attempts to dispute, for I have lately heard the directors themselves frequently admit, that they had committed a great error in driving so many shallow levels, or some declaration to that effect. But I do not think he should allow his feelings to overcome his judgment, and write such a confusion of ideas and expressions that no intelligent person can understand what he really intends to say, nor to whom he directs his observations. At any other time I should have allowed this jumble of letters and words to take their silent and harmless course; but, in the present state of "this concern," it is right that everything pertaining to it should be made as clear as possible. Although the letter of "Geologicus" purports to be a reply to another from a well-known and experienced miner, dated from Callington, he does that gentleman the injustice to mix up with his observations those of your correspondent in London, who favoured you with the extract. He says:—"Your correspondent thinks, without assigning any reasons, that 80 fms. is the proper depth for one here (driving a level)," &c.: and he then goes on to remark, that such a course would be inconsistent with the indications and the facts already ascertained in the mine. As to sinking the engine-shaft to the 80 fm. level, before again intersecting the lode, it was merely a casual observation made by *your* correspondent, in the short note which accompanied the extract from *his* correspondent's letter; and, moreover, it was no expression of his own opinion, but only what he understood the directors, upon advice, had determined upon doing. "Geologicus" next observes, that the agents of the company have *alone* given "satisfactory reasons why ore has not been found in considerable abundance at that depth, where such riches have been discovered in the celebrated mine near us, and why we are likely to reach it at a greater depth;" now, I am not aware of the "satisfactory reasons" which the agents have given, but I think they will find it difficult to give "satisfactory reasons" for the mode they have taken to prove what their more able and experienced brethren in the profession could long ago tell them was at least *very improbable*. As to the *proximity* of a "celebrated mine," where such riches have been discovered, I should like to know what is your correspondent's definition of "proximity;" and, if we are to expect to find *precisely* the same results wherever we choose to sink a shaft, to those discovered even in the immediate neighbourhood, we may at once dispense with "practical miners," and begin exploring the bowels of the earth from one end of the kingdom to the other. But the strangest error in the letter of your correspondent, "Geologicus," is the following:—"The 'Practical Agent' (he observes) is really not able to give the least information in any branch connected with mining; but, if he continues to feel so much sympathy for the unfortunate, let his advice be tendered in due time, and not after the results are obtained, when it is worse than useless." This is a shameful misrepresentation; the observations of the "Practical Agent," which appeared in your Journal on the 2d inst., were contained in a *private letter* to your correspondent, who communicated them, and it was not likely that any *advice* would be given where none had been asked; but simply expressions of opinion of one friend to another; but if "Geologicus" intends his remark as a hint to obtain some information from the "Practical Agent" as to how the *future* operations of the Wheal Martha should be conducted, I have no doubt his wishes will be acceded to, and I am quite sure there are few more capable of giving sound and intelligent advice. But it is erroneous, to represent the "Practical Agent" as stating his opinions "after the results are obtained;" for, if "Geologicus" had been an attentive reader, he would have seen the following in the letter at which he is so furious:—"I have written you to this effect *for years past*, and have *repeatedly* stated, that they might as well have thrown their money into the great deep, as use it in the manner they were doing." Now, Sir, as I have already observed, I am no miner, and in this letter I have not shown any pretensions to be one, but have entirely confined myself to a discrimination of the remarks of two gentlemen who assume appellations, claiming to belong to that profession. After due consideration, I must agree with the friend of your former correspondent, and I very much doubt, with him, whether every man who professes to be a miner, has the *practical* knowledge of mining—at least to such an extent as to justify large sums of money to be expended solely on the faith of his opinions. I have known, by experience, a man to be a very good *smelter* or *assayer*; but, at the same time, he has shown himself to be unfit to conduct *underground* operations. I am not, to my knowledge, personally acquainted with either of the "professional gentlemen," whose observations on this subject have occupied your columns—I may, therefore, with due respect, sign myself,

Oct. 25. AMICUS NEUTRO.

WHEAL CONCORD MINING COMPANY.

SIR,—The letters which appeared in your columns of the 23d inst., with reference to Wheal Concord Mine, cannot be allowed to pass unnoticed; but which, I have no doubt, will be replied to, or commented on, by the purser, secretary, or committee of management. Having, however, been classed with those parties, as one on whom censure should fall, in consequence of the accounts not having been duly audited and passed—an appointment of two of the adventurers having been made as auditors—I beg leave, as one so nominated, to state distinctly, that I have, on several occasions, attended at the office of the company, and gone through the accounts; but, in the absence of vouchers for the several amounts remitted, I declined passing the same. With whom the blame may rest, it is not for me to say; but certain it is, that the vouchers were not forthcoming. Thus much, so far as I am concerned as one of the auditors; and, as I believe an early meeting will take place in London, a requisition having been sent to the purser with such object, I shall then be ready to explain away any misapprehension which may be entertained on the part of the shareholders that I have, in the slightest degree, neglected the duty imposed on me, and the observance of which I readily accepted.

At a meeting, on the 11th of May, I find the following report of the proceedings thereat, which I extract from the *Mining Journal*:—"The chairman (Mr. English) handed in a letter—he having been appointed one of the auditors of the company—stating that, in the absence of vouchers, and in consequence of *errors appearing in the accounts*, he could not pass the same; and further, requesting that measures might be taken for supplying the necessary documents and explanations—or another party appointed in his stead. After some discussion, the subject was referred to the next meeting; in the interim, the attention of the purser and secretary being directed thereto."

In your Journal of May 22, 1847, an *advertisement* of the Wheal Concord Mining Company cites the following, as a part of the proceedings, at a meeting, held on the 15th of that month—Mr. Henry English in the chair. After various resolutions—"Mr. Henry English, as auditor, having reported that, in the absence of vouchers, he was unable to pass the accounts, it was moved by Peter Davey, Esq., and seconded by E. F. Dayrell, Esq.:—That a letter be addressed to Mr. Thomas Weekes, requiring him to transmit, without delay, the several receipts and vouchers in his possession, for moneys paid on account of the mine; and that the passing of the same be further deferred."

At the adjourned meeting, held on the 27th May, in the course of the proceedings, as reported in your columns, it will be found that "Mr. Crofts wished to draw the attention of the chairman (Mr. H. English) to the absence of the accounts being vouched by the auditors, and read a letter from the clerk of the mine, stating his readiness to transmit the same, on receiving authority from the purser."

Upon this occasion, a resolution was passed, and which appears in your advertising columns. It was moved by Mr. P. Davey, and seconded by Mr. Coulthard, "That the auditors having reported certain vouchers had not been furnished, and a communication having been received from the clerk on the mine, that he held the same, the purser be requested to obtain the several vouchers, and lay them before the auditors, so that the accounts may be forthwith passed and presented at the next meeting of adventurers"—which resolution, alike with the others, was carried unanimously.

I have only to observe that, since that period, no meeting has been convened of the adventurers at which the accounts have been submitted; nor has the secretary, purser, or clerk, submitted the accounts or vouchers—five months having since passed by. I am only anxious to relieve myself from any charge of neglect—being at all times anxious to perform the duties which I readily accepted—but to execute which, for the satisfaction of the adventurers, must needs have been to my own. Where the blame lies, I cannot take upon myself to say. Mr. Crofts, the secretary, on an interview yesterday, presented his accounts, stating they had been prepared for the past two months; but as these only referred to the London receipts and expenditure, I cannot admit them, and must still require vouchers from the mine, which I have no hesitation in saying, should have been obtained with each monthly cost-sheet. I am sorry thus to be called forward to exculpate myself and brother auditor; but I feel well assured, on an investigation taking place, it will be found that the blame falls on other parties for neglect and inattention to the interests of the company, and not on—H. ENGLISH: 25 *Fleet-street, Oct.* 27.

AN AFFECTION OF THE SPINE AND LIMBS CURED BY HOLLOWAY'S OINTMENT AND PILLS.—Mrs. Reynolds, landlady of the William the Fourth Inn, St. Ives, Hunts, had been ill for 14 months with an affection of the spine; her feet and legs were dreadfully swollen, and she became perfectly helpless. Several eminent surgeons and physicians attended her, under whose care she derived no benefit; but, by the recommendation of Mr. Prior, druggist, Bedford, she tried Holloway's pills and ointment.—These fine medicines, in about nine weeks, so completely restored her to health and strength, that she is now able to resume the duties of her household with ease and comfort.—Sold by all druggists, and at Prof. Holloway's establishment, 244, Strand, London.

THE ASTURIAN MINING COMPANY.

SIR,—In your paper of Saturday last, the 23d inst., notice is given of a meeting of this company, called for the 30th inst.; and, as the report of the last adjourned meeting, published in your Number of the 4th September last, will have prepared the shareholders for the discussion of business of much importance, I have to request you will be good enough to allow me an opportunity of offering some suggestions on those points which may be submitted for consideration. On referring to a report of the directors, dated the 23d November, 1846, it will be seen, that the chairman, in his congratulatory address to the shareholders then present, directed their attention to the produce of the quicksilver mine, and stated that the value of the ore then actually raised was estimated at 9000*l*. Now, at the meeting held on the 30th August last, we were informed that the produce of the above mine (the St. Eugenia) had been constantly on the increase, and that 8200 lbs., valued at about 1200*l*., had, up to the 9th of that month (August), been deposited in the stores of the Government at Madrid. Upon these data, therefore, it would appear, that 1200*l*. worth only of ore having been sold and delivered out of 9000*l*. worth, which was raised previously to November, 1846, there would still remain a balance of 7800*l*. in value to be accounted for, independently of the continually increasing produce of the mine, from Nov., 1846, to the present time. We were also informed, at the last meeting (30th August), that additional works were then forming, which would require an outlay of 2000*l*. per month, until their completion at the end of the present year; and that another call would, consequently, be necessary, unless an arrangement (to which I shall more particularly advert) should be effected. Now, in this respect, it will be obvious, by comparing the available means with the liabilities of the company, that these may be met, not only without making a call, but that a surplus in money will remain. To prove this, I have to submit the following estimate, drawn out rom the reports and statements of the directors:—

The Directors of the Asturian Mines.

1847—To call of £1 per share on 11,400 shares	£11,400	0	0
August 9—Sold 8200 lbs. quicksilver	1,200	0	0
Sept. and Oct.—Ditto ditto	2,400	0	0
Total	£15,000	0	0
1847—By expenses in new works, for five months, from August to Dec., 1847, inclusive, at 2000*l*. per month	£10,000	0	0
Balance	5,000	0	0
Total	£15,000	0	0

In the above calculation, it is assumed, that the deficiency of the payments on the call due last August, will have been compensated for by the arrears received on the 300 shares, which were declared liable to forfeiture, or by the money received from the sale of such shares as were so forfeited, and it is also assumed that there was no balance in hand. We may, therefore, I think, fairly infer, that there may be a balance of 5000*l*. on the above account; and that a further sum of 7800*l*., on account of ore raised in 1846, will have been realised by its sale, besides such increase in the produce of the St. Eugenia Mine as may have accrued. The proceeds from the sales of the coal, iron, and coke, are not given in such detail as to allow of an approximation being made in anticipating their value; but this must, at least, be considerable enough to defray the current expenses of working all the mines; and, in that case, the balance, as above stated, will entirely obviate the necessity of making any further call, which, in the present scarcity of money, would be highly inconvenient, and unpalatable to a very large proportion of the shareholders. The disposal of the 3600 unissued shares is a very important matter; if these be divided amongst the present proprietors, in the proportion of one to every four shares already held, there will still be a surplus of 750 shares; and there would be a deficiency of 200 shares to allot one for every three old shares. Perhaps it may be by far the most advisable course to accept the offer of Col. Biré. to purchase the 3600 unappropriated shares at par, which would bring in additional capital to the amount of 39,000*l*. But, as in that event, Col. Biré, having already 1800 shares, would then be the holder of 36 per cent. of the entire capital, and, probably, with a seat at the board, he would possess such a preponderating influence, that some means should be adopted to limit his power of voting, or to guard against his exercising too large a control in the direction. I must conclude these remarks, with the expression of my very strong conviction, that with a continued vigilant and economical management, the most sanguine expectations of the proprietors will, at no distant period, be fully realised.—OBSERVER: *London, Oct.* 26.

PROJECTED MINING MART.

SIR,—Although I am not a holder of a single mining share, you will, doubtless, permit me, as an observer of the times we live in, to express my decided approbation, in common with many who are largely engaged in this most substantial and national branch of our commerce, of the contemplated mart and club house, some time since noticed in your paper. The parties (whoever they may be) will excuse me if I presume to offer some suggestions to enable them at once to establish the mart; the club-house, in my opinion, being a secondary affair. How is it that the names of some parties, well known for their mining operations, do not appear as patrons (provisional directors being objectionable)? If they were to sanction the undertaking publicly, by paying the subscription (for that appears the extent of their liability), and give their names, it is said the matter would at once be started; but, when I applied for information, I was informed that those who had subscribed were not such as ought, in the first instance, to have their names published, not being sufficiently known to the mining public; and, on the other hand, those who took a public position declined to lend their names at first, although they were ready to subscribe and support the concern. I am well aware of the evils of the present system, for many of my friends have informed me of it; and, as there is no secret in the matter, I have no hesitation in denouncing it as scandalous, and injurious to the mining interest. Nearly all the brokers are dealers, and hence the evil; and, I am told, an establishment which was started to afford a remedy, by conducting business upon commission, only meet with a great deal of difficulty either in buying or selling, unless upon such terms as to cause a suspicion by the adventurers themselves. Every transfer, I am told, is made out in the broker's name, and hence the buyer and seller are never known to each other, the broker taking care always to conceal the name of his client. Now, why should this be the case? if some parties are mean enough to avoid the commission, they may unexpectedly subject themselves to irregularities; the transfer does not state the amount paid, and hence the brokers so arrange, that the price is either much under or over-rated. The establishing a mart, to be confined to members, would certainly obviate all these evils; parties wishing to sell would know where to go to, and those who wished to buy would do the same; instead of which, both buyers and sellers call upon a broker, and, according to his credulity, so is the price; and brokers who wish to buy, profess always to sell at an enormous reduction, and *vice versâ*. As I contemplate eventually interesting myself in mining matters (for under the present system I have no confidence whatever), you will excuse me recording my sentiments, which I have received from most unquestionable authority. AN OBSERVER.

EXTRAORDINARY BLAST.—A blast was made on the 11th inst., at the Gneiss Quarry of Hon. George Leiper, Ridley township, Delaware county, Pa, which cut out a block of the following dimensions:—Depth 13 ft. 6 in., width 56 ft. at one end, and 24 at the other; length, exteriorly 146 ft., interiorly 110 ft. By a rough estimate, the solid contents may be set down at 75,000 cubic feet, with a weight of 5770 tons. The bore was 18 ft. deep, 2 inches in diameter at the bottom, and two kegs of powder were employed.—*American Sun.*

MAMMOTH STARCH FACTORY IN MICHIGAN.—We learn, from the *Detroit Free Press*, that Mr. Chamberlin, from Vermont, has erected an extensive starch factory in Lapere county. It is made from potatoes; 100,000 bushels are annually consumed. The building is three stories high, and 214 feet long. One bin hold 40,000 bushels. The factory price for potatoes is 10 cents per bushel. There is now starch made from potatoes in New England, 22,000 lbs. annually. There are 160 establishments engaged in its manufacture, mostly in Maine and Vermont—much of it is shipped to England. It is used in finishing many kinds of fabrics—by confectioners—and finds its way into neat packages, with the label of arrowroot, for puddings.

Labour.

Ho! ye who at the anvil toil,
And strike the sounding blow,
Where, from the burning iron's breast,
The sparks fly to and fro!
While answering to the hammer's ring,
And fire's intenser glow—
Oh! while ye feel 'tis hard to toil
And sweat the long day through,
Remember, it is harder still
To have no work to do.

Ho! ye who till the stubborn soil,
Whose hard hand guides the plough,
Who bend beneath the summer sun,
With burning cheek and brow—
Ye deem the curse still clings to earth
From olden time till now.
But while ye feel 'tis hard to toil,
And labour all day through,
Remember, it is harder still
To have no work to do.

Ho! ye who plough the sea's blue field—
Who ride the restless wave—
Beneath whose gallant vessel's keel
There lies a yawning grave;
Around whose bark the wintry winds,
Like fiends of fury rave—
Oh! while ye feel 'tis hard to toil,
And labour long hours through,
Remember, it is harder still
To have no work to do.

Ho! ye upon whose fevered cheeks
The hectic glow is bright,
Whose mental toil wears out the day,
And half the weary night—
Who labour for the souls of men,
Champions of truth and right;
Although you feel your toil is hard,
Even with this glorious view,
Remember, it is harder still
To have no work to do.

Ho! all who labour—all who strive—
Ye wield a lofty power:
Do with your might—do with your strength—
Fill every golden hour!
The glorious privilege to do,
Is man's most noble dower.
Oh! to your birthright and yourselves,
To your own souls be true!
A weary, wretched, life is theirs,
Who have no work to do.

BALLESWIDDEN.—At a meeting of adventurers, held at the mine, on Wednesday, the 27th Oct., the accounts were seen, examined, and allowed, showing—By tin sold, 4624*l*. 0s. 6d.; old cast-iron, 38*l*. 11s. 4d. = 4662*l*. 11s. 10d.—Wages, July and August, 3114*l*. 7s.; coals, 225*l*. 9s. 10d.; carriage, 86*l*. 0s. 7d.; merchants' bills, 1040*l*. 8s. 11d.; lords' bounders' dues, 124*l*. 4s. 3d.—leaving balance in favour of adventurers, 72*l*. 1s. 8d.—The prospects of the mine were considered more favourable than at any previous account, the tin ground having much improved in the deepest level, which is now down about 116 fms.

EAST WHEAL ROSE.—A meeting of adventurers was held on the mine, on Monday last, when a dividend of 40*l*. per share was declared, and the following accounts, for July and August, were passed:—By balance at last account, 2582*l*. 18s.; ores sold, less dues, 11,824*l*. 5s.; Cargoll adventurers, for water charges, &c., 36*l*. 17s. 5d.; proportion of profit in Cargoll, 785*l*. 7s. 11d = 15,556*l*. 8s. 4d.—Costs, coals and merchants' bills, 7978*l*. 0s. 2d.; income tax, Stannary Court dues, 120*l*. 9s.; discount on ore bills, 36*l*. 19s. 11d.; Oxnam's mine adventurers, 5*l*. 11s. 8d.; dividend of 40*l*. per share, 5120*l*.=13,261*l*. 0s. 9d. —Balance in favour of adventurers, 2295*l*. 7s. 7d.

NORTH POOL.—A meeting of adventurers was held on the mine, on Tuesday last, when the following accounts for July and August were examined and allowed, and a dividend of 10*l*. per share declared:—By balance at end of June, 1*l*. 9s. 2d.; ores sold (less dues), 3173*l*. 5s. 8d.=3174*l*. 14s. 10d.—Costs, &c., for July and August, 1634*l*. 1s. 9d.; dividend of 10*l*. per share, 1000*l*.=2634*l*. 1s. 9d. —Balance in favour of adventurers, 540*l*. 13s. 1d.

CAPT. NICHOLAS TREDINNICK.—A coroner's inquest was held at Mount Charles, near St. Austell, on Saturday last, on view of the body of Capt. N. Tredinnick, who died on the Thursday previous, aged 61 years. It appeared that he was on that day returning home, from his employ at St. Austell Consols, and when he had reached the eastern end of St. Austell town, he ruptured a blood vessel. He was assisted into a dwelling-house close by, where he instantly expired. Verdict, "Died by the visitation of God."

GREAT WORK MINE.—A very valuable copper lode has lately been discovered at the 80 fm. level, in the Great Work Mine, in the parish of Germoe. A sample has been tried, and its produce was 70. The mine was not very prosperous previous to the discovery; but it is hoped that it will be the means of giving a large dividend to the spirited adventurers. The mine has been working upwards of 20 years, and her chief produce has been tin.—*Cornwall Gazette.*

VIRGINIAN GOLD MINES.—We learn, by the *Eureka*, that a handsome business is doing in the Vancluse Mine, Orange county, Va, the most extensive gold mine now in operation in the United States, the capital of which is to be raised $500,000, divided into 10,000 shares of $50 each. Large subscriptions have been made in Washington, and among them extensive ones for English houses.

THE FAN BLAST.—At the Institution of Mechanical Engineers (a notice of which appears in another column), a very valuable paper was read by Mr. Buckle, of the Soho-Works; it embodied much information, the result of careful research, experiment, and observation, and so valuable was it deemed, and so important the subject, that it was ordered to be printed. In a concluding passage of his paper, Mr. Buckle makes the following observations:—"The application of the fan has hitherto been applied chiefly to smitheries and foundries, and in but few instances, has it been applied to the smelting of iron ore. I am aware that differences of opinion exist as to the applicability of the fan to that purpose; the principal reason urged against it being the limited density to which blast can thereby be compressed, compared with the blast supplied by the cylinder; it remains, however, yet to be proved whether such high densities are absolutely necessary for the smelting of iron ore, whether we may not produce as good iron by a diffused soft blast as by the strong and generally applied concentrated blast. It may be considered presumptuous in me to doubt long-established practice, but the old maxim, there is no way like the old way, is not always based on unerring principles." We shall be glad of an opportunity of publishing this paper entire.

EXTRAORDINARY RAILWAY TRAVELLING—*Seven hundred and thirteen miles within twenty-four consecutive hours, by ordinary trains*, was accomplished, a few days since, by a passenger travelling on the Great Western Railway. The performance originated in a warm discussion between two gentlemen, who differed very widely in their opinions respecting certain asserted advantages of the broad over the narrow gauge. Among the illustrations of such alleged advantages, it was stated that a person might travel upwards of 700 miles in 24 consecutive hours, by the trains of the Great Western. This was denied, and a wager was the consequence. The time bill was produced, when it was found that, in order to win the wager, the 6·30 morning express train from Exeter must arrive at Paddington two or three minutes under its prescribed period of 4½ hours, and the gentleman who backed time, therefore, insisted on the wager being fairly won. The task was forthwith commenced, and gone through, as follows:—The gentleman betting against time started from Exeter by the 12 o'clock morning express from Exeter, which left that place at two minutes after 12 o'clock, and arrived at Paddington at 31 minutes after 4 o'clock. At half-past 5 o'clock, he left Paddington by the half-past 5 o'clock down express train, and reached Swindon at five minutes after 7 o'clock. Here he waited till the arrival of the train, which leaves Exeter at 15 minutes after 3 in the afternoon; and at 44 minutes past 7 o'clock he left Swindon, and proceeded as far as Maidenhead, which station he reached at 26 minutes after 9 o'clock. At 46 minutes after 9, he left Maidenhead by the mail tram, which starts from Paddington at 8 h. 55 m., and arrived at Exeter at 7 minutes after four next morning. After a detention of two hours and 25 minutes at Exeter, he started by the half-past six express train, which left that station at 6 h. 32 m., and arrived at Paddington at 10 h. 58 m. He immediately proceeded to the down station, caught the short train to Maidenhead, which left the station at 1 minute after 11 o'clock, and was at Maidenhead at 1 minute past 12 o'clock, having travelled 713 miles in 23 hours 59 minutes.

LONDON AND PARIS.—With the completion of the chain of railway from London-bridge to Paris, we are to witness the speedy transit the public have been so long anxiously looking for. There have been numerous gatherings of the leading railway men of France in London this week. The object of their visit is, to establish friendly and energetic measures for the realisation of the eagerly-desired union of the two countries. It is understood that Baron Rothschild has been a principal party in promoting the object, and, with the other railway leaders of northern railway Europe, has been working zealously in the cause. Several private meetings have been held in the board-room of the South-Eastern Railway, at which all the parties are understood to have been present; the chairman and directors of the South-Eastern Railway are said to have taken up the matter with vigour, and all is in a fair way for an early consummation. Mr. MacGregor (the chairman), Mr. Pritchard (the vice-chairman), and most of the directors of the South-Eastern Railway, are now in Paris, and we may expect the best results from their visit.

STOPPAGE OF RAILWAY WORKS.—By the suspension of railway works, consequent on the depression in the money market, it is believed that nearly 10,000 railway navigators will be put out of employment within the next 10 days, within a distance of 10 miles round Manchester. With so large a portion of their own working population suffering from the want of employment, this large amount of unemployed labour thrown upon the manufacturing towns cannot fail to seriously aggravate the state of things during the coming winter.

GREAT NORTHERN RAILWAY.—Enormous quantities of sleepers and timber have, during the week, passed up the Welland, where it is landed, by the contractors, on the slip by the race-course, about two miles below Spalding. A great number of people from Spalding visited the works on Sunday last. The works upon the banks of the Witham are proceeding very rapidly, the line having been formed the greater part of the distance between Lincoln and Boston, and rails laid upon a portion of it. The bridge over the Witham, at Bardney Lock, assumes a formidable appearance, and the workmen are busily engaged in driving piles for another bridge, near the Grand Sluice. The large landing quay and crane, in Skirbeck Quarter, with the tram-road therefrom to the company's yard, is also completed, and many vessels have already delivered cargoes of material there for the line.

TRENT VALLEY RAILWAY.—We understand that the Post-office authorities have at length given notice to the London and North-Western Company, to transfer the mail trains, on the 1st December, to the Trent Valley line, and the line will, consequently, be open for through traffic on that day. The opening of this new trunk line will very materially affect the travelling to and from the north. The mail trains will gain three-quarters of an hour, and the express trains one hour.

ST. ANDREW'S AND QUEBEC RAILROAD.—Intelligence was received by the packet yesterday, that the engineering party are at work on this line, and that the colonists still exhibit hope and confidence in the undertaking—a large proportion of the shares being taken in small amounts among the agricultural community. A deputation of the directors had proceeded to Halifax, to confer with the Nova Scotians upon the prosecution of a proposed line from Halifax to Windsor Annapolis, on the shore of the Bay of Fundy, opposite to St. Andrew's, so as to complete the steam communication between Halifax and Quebec.

DREADFUL RAILWAY ACCIDENT—The Cologne Railway, between Minden and Hanover, and which was opened only a few days ago, was the scene of a sad accident on the 17th inst. Two trains, the one coming from Hanover, and the other from Cologne, ran against each other before it was possible for the conductors to stop the engines, and to avert the danger of their being dashed to pieces. One of the engines and several of the carriages were crushed, and 32 of the passengers were wounded, some of them most severely—14 of them were carried to the inn at Minden. Judicial proceedings have been commenced against the conductor.

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending Oct. 23 was 17,379; amount of money, £72 8s. 3d.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning, Eleven o'clock.

Bank Stock, 9 per Cent., 184 ⅜ 3		Belgian Bonds, 4½ per Cent., 88	
3 per Cent. Reduced Ann., 80¼ 79¾ 80¼		Dutch, 2½ per Cent., 53¾ 3	
3 per Cent. Consols Ann., 81⅛ ⅛		Brazilian, 5 per Cents., 77½	
3 per Cent. Annuities, —		Chilian, 6 per Cents., 86¼ 5	
3½ per Cent. Ann., 81⅛ ⅜		Mexican, 5 per Cents., 16½ 15¾	
Long Annuities, 8⅜ ⅜		Spanish, 5 per Cents., 16¼ ⅜	
India Stock, 10½ per Cent., 226 5½ 8		Ditto 3 per Cents., 27	
3 per Cent. Consols for Acct., 81⅛ ¼		Portuguese, 5 per Cents., 75	
Exchequer Bills, 1000*l*. 3d., 20 22 dis.		Russian, 5 per Cents., 104	

MINES.—If we were to take the amount of business actually transacted this week, we should consider it as rather of a limited character; but, taking the *time bargains*, and those in course of negociation, we think that a fair proportion has been done. But we have made it an invariable rule not to notice business as transacted, until completed by the delivery of transfers, and payments fully made. We, therefore, look upon the business of the week as small, compared with that of a firm and healthy money market.

Although the announcement on Monday, of the Ministerial reply to the deputation of bankers, created a reaction in the Stock Exchange, and subsequently a firmer market in Consols, we do not find any positive improvement in mining shares—indeed, we look upon the mining share market as one peculiarly its own, and conducted by agents, who possess every facility of acquiring and affording the most satisfactory information relative to the prospects, advantages, profits, financial, as well as local, position of each particular mine, where, as in the Stock Exchange, but few find their way, if we except foreign shares and scrip companies: there is, therefore, a degree of responsibility attached to the agents selling mining shares, who, by their presumed knowledge of the legitimacy of an undertaking, can protect the purchaser from fraud and misguidance, and direct to what may be deemed a secure investment. Taking this as *data*, we may reasonably account for the change which has of late appeared in the opinions of capitalists, as regards mining property—that which had been previously looked upon as speculative, and of the most fearful kind, is now, under well-advised experience, embraced with confidence.

Our limits here preclude us from entering into detail what we consider to be safe adventures; and we possibly might find some who would differ in part from us, were we to enter into a classification of such mines; but, assuredly, we should not be condemned for partiality, if we were to mention those accessible in the market now, and which, in our opinion, are not attended with any apparent risk. We should, therefore, enumerate from our list such as—Bedford, Callington, Carn Brea, Condurrow, Herodsfoot, Trehane, Trelawney, Tamar, Stray Park, Tincroft, South Wheal Francis, Treleigh, West Seton, &c., exclusive of the regular dividend-paying mines, and those which are not yet meeting their cost, although in a fair way of doing so.

Shares in the following mines have changed hands during the week—viz.: Treviskey and Barrier, Trehane, Caradon Wheal Hooper, Stray Park, Bedford, West Wheal Jewel, Herodsfoot, Trevean, Trelawney, Mendip Hills, Holmsbush, &c.

In noticing the annual meeting of the Tamar Company, we observed, "that the smelting department had received some assistance from the mine profits." We certainly understood such an answer to a question put, or we should not have stated so much; but we have been since assured that the statement was erroneous, and at variance with the directors' report—and that the smelting company never required, or received, any assistance from the mine. The accounts of the smelting company, made up to the end of June last, show a considerable balance to its credit.

The Caradon United Mining Company held their meeting last Wednesday (a report of which will be found in another column), and, although nothing requiring especial notice transpired relative to the operations of the mine, still there was a matter of high importance connected with the legitimacy of the mining interest, and requires, at least, a passing remark. It appears that the lord of the land worked by the Caradon United Company granted a lease, for which he received a bonus of 800*l*.; and as this mine, as well as most others in the Caradon district, has required a greater outlay than was at first contemplated, he declines to pay his calls and arrears now due, although his property is still being worked for his advantage; but, as legal measures are being adopted, we shall defer our remarks to some future period.

The transactions in foreign mine shares have not been many this week. Asturians have been in demand, and met a ready sale at 4½ to 5 discount. The annual meeting will be held this day, when some favourable accounts are anticipated.

In July last, a company was formed for working the Deep River Mine, in North Carolina; but operations were not to commence, or the financial matters completed, until confirmations of the reports should be received from the agents sent out. This week, letters have been received, which state:—"The information received from North Carolina confirms the accounts of the value of the Deep River Mine. It is clear that the ore ground extends, at least, a mile in length." This company is under the management of Mr. John Taylor; and we have no doubt of hearing of active operations having been commenced.

The annual meeting of the Copiapo Mining Company was held yesterday; but we have not yet been furnished with the reports, &c.

HULL, THURSDAY.—This week has been marked by the abandonment of the fixed principle of the Bank Act of 1844—so long upheld at the cost of mercantile ruin and distress. The particulars of the relaxation will be found noticed elsewhere in these columns. As a measure of relief, much cannot be expected from it *of itself*; but it will, doubtless, contribute to the restoration of confidence. There is all the difference between being able to command accommodation, at even a high rate of interest, and not being able to command it at all; and when those who have money to lend, find there is another source—although even at so high a rate as 8 per cent.—accessible to the borrower, they may see the necessity of bringing their ideas to something like that rate, and ultimately to a lower one. The real question, however, is, what is the available amount of unemployed capital for confidence, once fully restored, to work upon—and this is a disputed point; many people "think there is plenty of money in the country." The *Times*, on the other hand, says, we are nationally poor. Shares, under the influence of the arrangement referred to, have considerably advanced. The jobbers on the London Stock Exchange have all turned buyers; and those who have been wise enough, and rich enough, to buy within the last few weeks—or, we should, perhaps, say, within the last few days—may now make a handsome profit, which, we think, will be no permanent reflection on their judgment, if they realise before long.

NEW PATENTS.

E. Barker, Budleigh, Salterton, Devon, gentleman, for certain improvements in the preparation of manure.

W. Thomas, Cheapside, merchant, for certain improvements in the construction of stays, and in machinery for manufacturing stays; parts of which machinery are applicable to other species of weaving.

G. Petri, Mountford-street, Whitechapel, Middlesex, for certain improvements in electric telegraphic apparatus.

C. Carey, gent., Churchyard-row, Newington-butts, Surrey, for improvements in obtaining infusions or extracts from coffee and other matters.

J. Jayet, Paris, engineer, for certain improvements in calculating machines.

E. Evans, of the Haigh Foundry Company, Wigan, Lancaster, for improvements in wheels for railway and other carriages.

W. Kirrage, Warner-place, Hackney-road, Middlesex, for an improved combination of materials for building purposes, and a new application of certain materials for building purposes.—*Mechanics' Magazine.*

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Ships at market, 237.—Sold, 202; unsold, 35.

WEDNESDAY.—Adair's Main 17—Buddle's West Hartley 19 3—Charlotte 17 6—Carr's Hartley 19—Davison's West Hartley 19—Hasting's Hartley 19—Holywell Main 18—New Tanfield 16—North Percy Hartley 19—Original Pontop 17 6—Ord's Redheugh 17—Tanfield Moor 18—Townley 17—West Wylam 17 6—West Hartley 19 3—Wylam 17 3—Wall's End Acorn Close 18—Bell and Brown 19—Bewicke and Co. 19—Framwellgate 18—Gosforth 19—Heaton 19 3—Hedley 19—Ramsay 16 6—Riddell's 19—Walker 18 6—Willington 18—Washington 18—Eden Main 19 9 Belmont 20—Braddyll's Hetton 20 3—Crawford's 16 6—East Hetton 19—Haswell 20 9—Hetton 20 3—Keeper 20 3—Lambton 20 3—Lumley 19 6—Morrison 18 9—Murton 20 3—Russell's Hetton 20 3—Richmund 19 3—Shotton 20 3—Stewart's 20 6—Cassop 20 3—Hudson's Hartlepool 19 6—High Thornley 17—Heugh Hall 19 6—Kelloe 20 3—South Kelloe 19 6—Thornley 19 3—Adelaide Tees 20—Cowndon Tees 19 3—Denison 18 6—South Durham 19—Seymour Tees 19 6—Tees 20 6—West Hetton 18 3—Cornforth 19—West Tees 18—Anderton's Garesfield Coke 26 6—Cowpen Hartley 19—Howard's West Hartley Netherton 19—Sidney's Hartley 19.—Ships at market, 240; sold, 197; unsold, 43.

FRIDAY.—Adair's Main 17—Buddle's West Hartley 19 6—Carr's Hartley 19 6—Davison's West Hartley 19 6—Holywell Main 18—New Tanfield 16 6—North Percy Hartley 19—Original Pontop 16 3—Ord's Redheugh 17—Pelton Main 17—Tanfield Moor 18—West Wylam 17—Wylam 17 3—Wall's End Elm Park 18 6—Hedley 19 3—Ramsay 16—Eden Main 20—Braddyll's Hetton 20 6—Hetton 20 9—Lumley 19 6—Cassop 20 3—High Thornley 17 3—Kelloe 20 3—Adelaide Tees 20 6—Seymour Tees 19 9—Tees 20 6—Cornforth 19 3—Howard's West Hartley Netherton 19 6—Sidney's Hartley 19 6.—Ships at market, 44; sold, 34; unsold, 10.

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LATEST CURRENT PRICES OF METALS.

LONDON, OCTOBER 29, 1847.

	£ s. £ s. d.		£ s. £ s. d.
IRON—Bar *a*..Wales..*ton*	8 10 — 8 12 6	COPPER—Ord. bottoms ..	0 0 — 0 0 12
„ ..London ..	0 0 — 9 15 0	YELLOW METAL SHEATHING	0 0 — 0 0 9½
Nail rods	0 0 — 10 15 0	TIN—Com. blocks *g*..*cwt.*	0 0 — 4 5 0
Hoop (Staf.) „	0 0 — 11 15 0	„ bars	0 0 — 4 6 0
Sheet „	0 0 — 13 0 0	Refined	0 0 — 4 10 0
Bars „ „	0 0 — 11 5 0	Straits *h*	0 0 — 4 2 0
Welsh cold-blast foundry pig	4 10 — 5 5 0	Banca	0 0 — 4 4 0
Scotch pig *b*, Clyde	2 15 — 3 0 0	TIN-PLATES—Ch., IC *i*, *box*	1 8 — 1 10 0
Rails, average	8 10 — 9 0 0	„ IX	1 14 — 1 16 0
Chairs	5 15 — 6 0 0	Coke, IC	0 0 — 1 5 0
Russian, CCND *c*	0 0 — ——	„ IX	0 0 — 1 11 0
„ PSI	0 0 — ——	LEAD—Sheet *k* ......*ton*	0 0 — 19 7 6
„ Gourieff	0 0 — ——	Pig, refined	0 0 — 20 5 0
„ Archangel	0 0 — 13 10 0	„ common	0 0 — 18 10 0
Swedish *d*, on the spot	0 0 — 11 5 0	„ Spanish, in bd.	0 0 — 18 0 0
„ Steel, fagt.	0 0 — 16 5 0	Red	0 0 — 19 10 0
„ „ kegs *e*	0 0 — 15 0 0	Dry White	0 0 — 24 0 0
COPPER—Tile *f*	0 0 — 97 0 0	Shot (Patent)	0 0 — 21 0 0
Tough cake	0 0 — 98 0 0	SPELTER—(Cake) *l* on spot	17 10 — 17 15 0
Best selected	0 0 101 0 0	„ „ for arrival	17 5 — 17 10 0
Ordin. sheets, *lb.*	0 0 — 0 0 11	ZINC—(Sheet) *m* export.*	0 0 — 27 0 0
		QUICKSILVER *n* ....*lb.*	0 0 — 0 4 6

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto *e* In kegs ½ and ¾-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash. *m* Discount 1½ per cent. *n* Discount 1½ per cent. * For home use it is 32*l.* per ton.

[*From our Correspondent.*]

IRON.—Welsh and Staffordshire continue in moderate request, at quotations; Scotch pigs—some forced sales have taken place at low rates, and their being no demand at quotations, it must be considered nominal; in Swedish iron very little doing.

COPPER, LEAD, and TIN-PLATES are without change.

TIN.—English and Foreign very dull, prices looking down.

SPELTER.—Several sales have been made at 17*l.* 10*s.*, but some holders ask 5*s.* more—there are no buyers above the former rate.

GLASGOW PIG-IRON TRADE, OCT. 28.—We continue without much demand for this article, and prices remain as they were quoted in last week's *Mining Journal*. In the absence of business to determine the price, it is indefinitely quoted at 57*s.* 6*d.* to 58*s.* 6*d.*, cash, for mixed Nos.

THE IRON TRADE.—The iron trade still remains firm, and all the works are in active and vigorous operation. Several sales of pig-iron have been effected at a shade lower, but respectable makers will not deviate, as there is no actual necessity for it. The failure of Messrs. H. Grazebrook and Co., iron merchants, Liverpool, will affect several small houses, who were not prepared for the serious losses they will incur; but, beyond this, no harm will be done. The company we referred to a short time ago, which is working out a patent, has not, we suppose, been able to get the shareholders to respond to the "call" made upon them, as, on Saturday evening, they gave notice to their men to leave, which is, it is presumed, a preliminary step to the works being closed, and the affairs finally wound up. The suspension of the Bank Charter Act has revived the hopes and increased the confidence of all parties.—*Birmingham Advertiser.*

EXPORTATION OF THE PRECIOUS METALS.—The following are the official returns of the exports of gold and silver from the port of London for the last week:—

Silver bars to Hamburgh .... 12,000 ounces.

CURRENT PRICE OF GOLD AND SILVER.

Foreign gold, in bars ....per oz.	£3 17 9	New dollars............per oz.	£0 4 9½
„ Portugal pieces....	0 0 0	Silver in bars (standard)	0 4 11½

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Price per share	Last Div.	Traffic Returns. 1847	1846
Arbroath and Forfar	15	£179,939	26	4 p.c.	£222	176
Chester and Birkenhead	15	706,793	39½	—	716	484
Dublin and Drogheda	35	733,655	54	3½	846	754
Dublin and Kingstown	7½	473,282	—	9	770	801
Dundee, Perth, and Aberdeen	36½	285,745	35	6	829	305
East Lancashire	24	1,207,490	13½	—	928	696
Eastern Counties	202½	7,698,370	15½	5	12165	9551
Eastern Union	43½	979,926	60	—	1238	405
Edinburgh and Glasgow	48	2,375,745	47½	6	3746	4278
Edinburgh and Northern	29	953,207	16½	—	627	—
Glasgow, Paisley, and Ayr	60½	1,890,547	121	7	2914	2306
Glasgow, Paisley, & Greenock	23	838,964	18½	3	1172	988
Gt. Southern & Western, Ireland	110½	1,876,326	22	—	2042	1081
Great Western	240½	10,630,763	90	8	19759	20056
Kendal and Windermere	10½	147,001	23	—	126	—
Lancaster and Carlisle	70	1,291,913	50	—	1479	—
Lancashire and Yorkshire	92½	6,087,314	74½	7	9826	9568
London and North Western	428	20,010,467	155	9	41918	39349
London and Blackwall	4	1,146,289	5½	½	839	846
London, Brighton, & South Coast	147	5,659,180	41½	4	8508	8328
London and South-Western	186	5,836,132	56½	9	9008	6813
Londonderry and Enniskillen	14½	160,013	24½	—	116	—
Manchester, Sheffield, & Lincolnsh.	49½	2,078,135	89	5	2214	1812
Maryport and Carlisle	28	424,417	—	3	697	586
Midland Company	382	8,658,604	107	7	23767	19067
Midland Great Western (Irish)	26½	583,776	—	—	894	—
Newcastle and Carlisle	65	1,184,080	117	5½	2274	2013
Norfolk	70½	1,375,633	86	6	2039	1552
North British	78	2,514,150	24	5	2457	1208
Shrewsbury and Chester	17	591,158	21½	—	602	—
South Devon	29	1,339,860	21	—	881	360
South-Eastern	157½	6,398,218	28½	6	9846	9460
Taff Vale	38	785,607	—	5½	1619	1304
Ulster	25	646,211	52	6	901	754
Whitehaven Junction	12	130,000	—	4½	184	—
York, Newcastle, & Berwick	236½	3,685,102	31	9	11738	7815
York and North Midland	196	3,196,869	70	10	8694	7069
FOREIGN RAILWAYS.						
Amiens to Abbeville	28	573,338	—	4	615	—
Antwerp to Ghent (three weeks)	31	——	—	—	1313	—
Belgian	—	——	—	—	60899	58777
Dutch Rhenish	57½	——	2½	—	1043	1041
Northern of France	211	2,000,000	11½	4	14163	9530
Orleans to Bourges (Central)	70	——	—	—	2425	—
Orleans to Tours	72	600,000	—	5	3815	3130
Paris and Orleans	82	2,011,720	44	12½	9290	8805
Paris and Rouen	85	2,082,916	34	9½	8910	6940
Rouen and Havre	59½	——	20½	4	3180	—
Strasburgh and Basle (monthly)	88	——	8	1½	9080	10227
West Flanders (ditto)	—	——	2	—	1615	—

Total earnings for last week, £193,723, being an increase of £30,478 over last year.

PRICE OF MATERIALS,

As Charged at the Stray Park Mines in the following months of 1847:—

DESCRIPTION.	MAY.	JUNE.	JULY.	AUGUST.	
Coal, carriage included	15*s.* 6*d.*	15*s.* 6*d.*	15*s.* 6*d.*	15*s.* 6*d.*	per ton.
Timber, balk	—	—	1 1	1 1	per foot.
„ pine	1 5	—	—	—	„
Iron, common	10 0	10 0	10 0	10 0	per cwt.
„ hoop	14 6	14 6	14 6	14 6	„
Steel	—	42 0	—	—	„
Rope	—	—	—	38 0	„
Hemp	—	0 4½	—	0 4½	per lb.
Yarn	—	0 5	—	—	„
Tallow	54 0	—	—	—	per cwt.
Nails, patent	—	19 0	17 8	—	„
Leather	—	1 2	—	1 2	per lb.
Candles	5 9	5 9	6 0	6 0	per doz.
Powder	38 0	38 0	38 0	38 0	per cwt.
Hilts	—	—	1 4	—	per doz.
Cans	4 9	—	4 9	—	„
Safety fuse	0 4	0 4	0 4	0 4	per coil.
Whim kibbles	—	—	19 0	19 0	each.

IMPORTANT IMPROVEMENT IN BLAST CYLINDERS.—A pair of engines and powerful blast cylinders are being erected at an iron-work for 1200*l.* of a novel, but simple and efficacious, construction, to supersede and do the work of apparatus set up at the same establishment, at a cost exceeding 3000*l.* This great economy cannot but interest ironmasters generally; and we would, therefore, direct their attention to a notice addressed to them on the subject, in our advertising columns.

MIXED GAUGE RAILWAY—GLOUCESTER AND CHELTENHAM.—This line of railway, on which both broad and narrow gauge rails are laid down, and which was fully described in our last Journal, was opened for traffic on Saturday last. The working was every way satisfactory, and we trust may continue so, without the occurrence of the accidents or inconvenience anticipated by many.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergweasin	7	12
512	Albert Consols	1	2½
1024	Alfred Consols	4½	30
256	Alternum Consols	2	12
235	Andrew and Nanglies	28½	11½
10000	Ayrshire Iron Company	5	3
1024	Balleswidden	9	18
128	Balnoon Consols	25	25
10000	Banwen Iron Co.	2	—
1000	Barristown	4½	10
4000	Bedford	2½	4
128	Besore Lead Mine	14	10
315	Birch Tor Tin Mine	24½	—
8000	Blaenavon	50	20
100	Botallack	175	80
120	Brewer	5	7
10000	British Iron, New, regis.	10	10
—	Ditto ditto, scrip	10	12
128	Budnick Consols	52½	40
128	Burthy	20	21
100	Bwlch Cwmerân	20	—
128	Callestock	17	30
1000	Callington	19	34
20000	Cameron's Steam Coal	4	3¾-½
256	Caradon Copper Mine	9½	1
256	Caradon Mines	22½	17
256	Caradon United	24	5
256	Caradon Wh. Hooper	20	12
1000	Carn Brea	15	102½
2048	Cascade	1	1
112	Charlestown	200	100
166	Cleveland	9	10
512	Coatlithe Hill	½	2
1900	Combmartin	7½	3
500	Comblawn	¾	6
128	Comfort	45	100
256	Condurrow	20	33
2560	Cook's Kitchen	14	2
2048	Coombe Tin Mine	4½	4½-5
1000	Coombe Valley Quarry	1½	2
1000	Copper Bottom	1	5
1024	Cosheen	4½	20
240	Craddock Moor	15½	15
128	Creeg Braws	120	100
500	Cubert Mine	12½	15
2048	Dartmoor Consols	2	2
7500	Demelza Mines	2	2
7100	Derwent	8½	5
1024	Devon & Courtenay Con.	7½	2½
1024	Devon Great Consols	1	—
1000	Dhurode	2	5
186	Dolcoath	30	50
2560	Drake Walls	4	4
10000	Durham County Coal	45	9
3000	Dyfngwm	10	12½
256	East Alvenney	12½	50
112	East Caradon	42	42
2048	East Crowndale	4½	4
512	East Combe Silver-Lead	6½	6½
128	East Pool	5	50
100	East Relistian	22	40
9000	East Tamar Consols	1½	2
—	East Wheal Albert	1	3
94	East Wheal Crofty	280	125
256	East Wheal Fortune	2	3
128	East Wheal Rose	50	1300
2048	East Wh. Rough Tor	½	2
—	East of Scotland Iron Co.	2½	1
123	East Wheal Seton	14	20
256	Elborough	1½	2
256	Exmoor Wh. Eliza	3½	7
512	Fowey Consols	40	45
6400	Gadair	2	20
20000	Galvanised Iron Co.	10	9½
10000	Gen. Mining Co. for Irel.	2	1½
2048	Georgia Tin Mines	1½	1½
256	Gonumena	31½	45
128	Goonvrea	4	1½
244½	Grambler & St. Aubyn	—	12
100	Great Consols	1000	400
256	Great Callestick Moors	22	25
2560	Great Michell Consols	1½	4
256	Great Resugga Moor	5	15
512	Gt. Wh. Rough Tor Con.	6½	21
1500	Great South Tolgus	2	2
100	Grogwinion	5	—
1000	Gunnis Lake	1½	3
256	Gwinear Consols	7	18
1000	Harrowbarrow Old Mine	8½	2
6000	Heignston Down Con.	½	2½
280	Herodscombe	2½	9
256	Herodsfoot	14	19
10000	Hibernian	12½	1½
239	Hobb's Hill	6	3
1000	Holmbush	19	8
827	Kirkcudbrightshire	5½	7
2048	Lamherooe Wh. Maria	11	3
128	Lelant Consols	90	60
160	Levant	—	90
1000	Lewis	15	6½
1000	Llwyn Malees	5	—
8600	Llynvi Iron	50	60-65
256	Lostwithiel Consols	15	15
6000	Marke Valley	10	3
5000	Mendip Hills	2½	1½
5000	Merionethshire Slate & Slate Slab Co.	1½	2¾-2½
10000	Mining Co. of Ireland	7	7½
256	New East Crowndale	3½	3½
128	North Fowey Consols	30	30
100	North Pool	45	370
70	North Roskear	10½	300
512	North Treburget	2	3
100	North United	72	15
256	North Wh. Abraham	⅝	12
262	North Wh. Leisure	1½	3½
128	North Wh. Providence	2½	8
15000	Northern Coal Co.	23	2
1200	Old Delabole Slate Co.	25	50
128	Par Consols	900	1000
4000	Pennant	1½	2
100	Penrhiw	30	65
1280	Perran St. George Un.	13	20
128	Perran Wh. Virgin	9½	15
512	Plymouth Wh. Yeoland	4½	20
256	Polsaith Consols	3	5½
112	Providence Mines	35	45
256	Redruth Consols	3	2
10000	Rhymney Iron	50	30
10000	Ditto New	7	6½
256	Rose Consols	10	2
1000	Rosewall Hill	1	5
256	Rosewarva Mines	—	12
—	Shotts Iron Company	50	60
2500	Silver Valley	5	2
1024	South Callington	5	5-6
128	South Caradon	10	450
1100	South Dolcoath	3	2½

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
256	Sth. Friendsh. Wh. Ann	16	25
300	South Harvannah	10	25
9000	South Tamar	½	½
256	South Tolgus	7½	35
800	South Towan	10	1½
256	South Trelawney	15½	7
128	South Yeoland	16½	20
128	South Wheal Basset	110	75
124	South Wh. Francis	160	210
256	South Wh. Hope	—	5
1000	South Wh. Maria	2½	2
256	South Wheal Rose	11½	1
256	South Wh. Sophia	4	4½
10000	Southern & Western, Irish	2	4
280	Spearne Moor	30	40
256	St. Austell Consols	9	10
94	St. Ives Consols	—	320
128	St. Michael Penkivel	5	10½
1000	Stray Park	43	24
9600	Tamar Consols	3	5
1024	Tavy Consols	3½	3½
6000	Tincroft	7	8
1000	Tin Vale Consols	2	2½
128	Tokenbury	143½	10
256	Trehane	2	27
8000	Treleigh Consols	6	4
2000	Trenance	2	50
96	Tresavean	10	250
120	Trethellan	5	16
120	Treviskey and Barrier	130	150
258	Trevean	1½	30
256	Trewollack	20	—
128	Trewellard	12	26½
100	United Mines	300	350
256	Wellington Mines	15	30
128	West Basset	45	22
256	West Caradon	20	140
128	West Cargoll	2	12
512	West Fowey Consols	40	15
256	West Grambler	7	8
256	West Providence	1	20
200	West Seton	40	130
—	West of Scotland Iron Co.	210	210
120	West Trethellan	5	35
256	West United Hills	2½	4
256	West Wh. Friendship	8	3
3845	West Wheal Jewel	11	1½
2560	West Wh. Maria	2½	1½
2560	West Wheal Rough Tor	½	2
256	West Wheal Shepherd	5	2½
256	West Wheal Tolgus	21½	8
256	West Wheal Treasury	19	10
5200	Wicklow Copper	5	11½-¾
184	Wheal Adams	41	10
1000	Wheal Agar	—	10
256	Wheal Albert	10	8
128	Wheal Acland	13	2
256	Wheal Allen	2	5
237	Wheal Anderton	18	30
128	Wheal Ann	—	50½
512	Wheal Ann, Bridford	1	2
512	Wheal Anna Maria	—	5
128	Wheal Arvose	3½	5
1024	Wheal Ash	3	12
120	Wheal Bal	5½	20
2560	Wheal Barbara	1½	2
256	Wheal Benny	8½	5
256	Wheal Blencowe	8	5
256	Wheal Bucketts	20	18
256	Wheal Byon Consols	½	½
256	Wheal Calstock	3	4
136	Wheal Clifford	190	190
128	Wheal Courtenay	—	20
6000	Wheal Curtis	2½	3-3½
256	Wheal Dyke	12	13
256	Wheal Fortescue	6½	8
512	Wheal Fortune Consols	3½	6½
2048	Wheal Frederick	2	2
388	Wheal Franco	27	32
1024	Wheal Grace	3	2½
128	Wheal Harriet	45	50
256	Wheal Jane	21	15
256	Wheal Louisa	8½	8
112	Wheal Margaret	79	250
256	Wheal Maria (Hayle)	24	10
4000	Wheal Martha Consols	5	—
512	Wheal Mary Ann	5	18
256	Wheal Mary Consols	38	25
256	Wheal Mary (Lanivet)	6½	4
256	Wheal Maude	1½	1½
210	Wheal Prospect	4	7
120	Wheal Reeth	27	80
128	Wheal Rose	60	45
2048	Wheal Samson	—	20
99	Wheal Seton	214	1100
256	Wheal Sisters	29½	20
256	Wheal Sophia	4½	10
128	Wheal Spearne	10	75
128	Wheal St. Ann	9	15
260	Wheal Trelawney	7½	95
256	Wh. Tremaine (St. Ervan)	1½	20
256	Wheal Tremayne	35	30
128	Wheal Trew	20	21
256	Wheal Trevenna	3	4
92	Wheal Tryphena	140	265
128	Wheal Venland	13½	4
256	Wheal Vlow (Perranz.)	½	½
184	Wheal Vyvyan	—	60
256	Wheal Williams	6	6

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5000	Altan Mining Company	14½	3½
15000	Asturian Mining Co.	11	6½-7
20000	Australian	2	2½
10000	Anglo-Mexican Co.	100	2
12374	Ditto Subscription	25	2½
3000	Bolanos	150	4
2000	Ditto Scrip	15	4½
12000	Brazilian Imperial	22	6
10000	Cobre Copper Co.	40	18
8500	Colombian Co. regis.	55	1
5000	Ditto Scrip	5½	
5000	Copiapo Mining Co.	14	2½
10000	General Mining Ass'n.	20	14
5000	Kinzigthal Mining Ass.	2	2½
20051	Mexican Company	59	—
2000	Mexican & South Amer.	7	1½
5000	Mocaubas & Cocaes	25	6-6½
29320	Rl. del Monte, regis. / Ditto unregistered	28½	av. 2
	Ditto Red Debentures	—	10
	Ditto Black ditto	—	8
	Ditto Loan Notes	150	60
7000	Royal Santiago	10	6
2000	Pachuca Mines	4	4½
11000	St. John del Rey	15	6½
13174	United Mexican	28½	2½

SOUTH AUSTRALIAN SHARE MARKET.

Shares.	Company.	Paid.	Price.	Shares.	Company.	Paid.	Price
2000	Adelaide	5	7½	18	South Para	15	50
6000	Barossa Range	½	3	1000	Poonawurta	—	9½-10
2464	Burra Burra	5	110	400	Princess Royal	34	259
436	Grand Junction	15	28	10000	Royal Mining Company	½	1½
200	Greenock Creek	5	12	10000	Royal South Australian	—	55½
100000	Scottish Invest. Co.	1	1½	600	Victoria	2	3
500	Wakefield	2	3				

SOUTH AUSTRALIA AND NEW ZEALAND.

100000 North British Australasian (Kaw-aw, &c.) .... 1 .. 1

*** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

JOINT-STOCK BANKS.

Shares.	Companies.	Paid.	Div. p. cent.	Price.
22,500	Australasia	£40	£3	£15½
20,000	British North American	50	5	44
20,000	Colonial	25	5	15½ 16
—	Commercial of London	20	6	22 23
4,000	Ionian State	25	6	24½ 25
60,000	London Joint-Stock	10	6	16
30,000	London and Westminster	20	6	23
10,000	National Provincial of England	35	5	35
20,000	National of Ireland	22½	5	19
20,000	Provincial of Ireland	25	8	43
4,000	Ditto New	10	8	19½
20,000	Union of Australia	25	6	24 25
10,000	Ditto New	2½	6	2½ 2½
60,000	Union of London	15	5	13

GAS-LIGHT AND COKE COMPANIES.

Shares.	Companies.	Paid.	Div. p. cent.	Price.
5,000	British (London)	£18	£1*	£18
5,000	Ditto (country)	19	1½*	24
1,000	City of London	100	10	290
1,000	Ditto New	100	10	210
4,000	Equitable	50	2½	38
10,000	European	20	1½	10
12,000	Gas-Light and Coke Chartered Co.	50	6	57½ 58½
6,000	Ditto New	10	6*	12
9,000	General United Gas-Light Company	50	2	17½ 18½
10,000	Imperial	50	6	80
46,400*l.*	Ditto Debentures	100	4	100
8,000	Imperial Continental	39½	4½*	61 63
7,000	Ditto New	28	4½*	61
54,500*l.*	Ditto Debentures	100	5	100 102
2,000	Independent	40	6	64
3,000	London	50	6	40
3,000	Ditto	50	5	48
9,000	Phœnix, or South London	43	5	36½
1,000	Ratcliff	80	5	80
4,000	South Metropolitan	25	6	31½ 3½

MISCELLANEOUS COMPANIES.

Shares.	Companies.	Paid.	Div. p. cent.	Price.
10,000	Assam Tea Company	£20	—	£ 3
1,080	Auction Mart	—	£ ¾	28
10,000	Australian Agricultural	30	1	22
10,000	Australian Trust	35	—	30
8,000	British Alkali	25	4	16½
10,000	British American Land	35½	—	14
8,600	British Rock and Patent Salt	35	18	11
8,915	Canada	32½	6	30½
—	City Bonds (Navigation)	—	3½	89
1,800	Corn Exchange	37½	1½	26½
5,000	Droitwich Patent Salt	25	½*	11
2,700	Equitable Reversionary	85	4½	87 90
—	General Reversionary Interest	100	5	104 106
0,000	General Steam Navigation	14	1½*	23½
—	Hudson's Bay Stock	—	10	230 240
2,100	Hungerford Market	100	½	—
1,500	London Commercial Sale Rooms	—	1½	31 32
8,000	London Reversionary	22	—	23 24
300	Margate Pier	—	10	196
10,000	Mexican and South American	7	—	3½ 4
20,000	New Brunswick	75	—	—
11,600	Peninsular and Oriental Steam	50	7	55½
6,600	Ditto	40	—	—
5,387	Reversionary Interest Society	100	4½*	97
—	Royal Mail Steam	—	5½	58
8,000	South Australian	25	6	—
20,000	Upper Canada	100	5	93 94
20,000	Ditto	—	5	93 94
10,000	Van Diemen's Land	20	—	3 4

* Those marked with an asterisk (*) are dividend per share.

LEAD ORES.

Sold in London.

Mines.	Tons.	Amount.	Purchasers.
Cubert	46	£9 15 6	Walker, Parker, & Co.
Sold at Aberystwith.			
East Logylas	60	9 3 6	Walker, Parker, & Co.
ditto	60	9 3 6	ditto
Sold at Holywell, on the 28th October, 1847.			
Jamaica	25	£9 10 0	Mather & Co.
ditto	25	10 10 0	ditto
Westminster	60	8 18 0	Walker, Parker, & Co.
ditto	15	9 14 0	Mather & Co.
Belgrave	20	9 8 0	ditto
Fronfownog	100	9 15 0	ditto
ditto	50	16 10 0	Ditto and Walker.
Barristown	36	12 12 0	Mather & Co.
ditto	7	12 12 0	ditto
Cairnsmore	40	8 15 0	Walker, Parker, & Co.
ditto	2½	4 0 0	ditto
ditto	1½	10 0 0	ditto
Shallee	27	11 5 0	ditto
ditto	14	9 7 6	ditto
Cowarck	28	8 10 0	Mather & Co.
Pantywyn	20	9 2 0	ditto

BLACK TIN.

Sold by Ticket, on the 20th October, 1847.

Mines.	Tons.	Price per ton.	Purchasers.
Drake Walls	5½	£45 12 6	Calenick Co., and Williams.
ditto	8½	33 10 0	ditto
ditto	2½	20 0 0	ditto
ditto	1½	18 0 0	ditto

COPPER ORES.

Sampled Oct. 13, and Sold at Farquharson's Hotel, Truro, Oct. 28, 1847.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
United Mines	125	£5 5 6	Par Consols	59	£2 14 6
ditto	108	3 5 6	Tresavean	91	5 5 6
ditto	103	3 12 6	ditto	65	3 3 6
ditto	102	6 1 6	ditto	46	5 9 6
ditto	100	4 11 0	ditto	45	7 4 0
ditto	97	5 10 6	Creeg Braws	57	5 16 0
ditto	89	4 15 6	ditto	56	3 4 0
ditto	76	3 16 6	ditto	47	4 4 0
ditto	75	3 0 6	ditto	20	4 2 0
ditto	66	4 2 6	Treleigh Consols	67	9 10 6
ditto	65	3 15 6	ditto	61	3 13 0
ditto	63	3 6 0	ditto	35	1 11 6
ditto	60	4 8 6	Wh. Brewer	55	1 17 0
ditto	38	8 1 0	ditto	43	0 16 0
ditto	38	3 6 6	ditto	17	2 11 0
South Caradon	104	7 12 0	South Tolgus	71	5 4 6
ditto	78	4 17 6	West Trethellan	51	1 19 6
ditto	76	7 16 0	Wh. Mary Consols	46	5 5 0
ditto	72	4 6 0	North Downs	16	4 6 6
ditto	20	3 12 0	Wh. Unity Wood	11	5 7 0
Par Consols	91	7 9 0	East Downs	7	6 2 0
ditto	74	5 4 6	Wh. Tolgus	4	3 4 0
ditto	69	3 18 6	Pembroke	1	10 17 6

TOTAL PRODUCE.

United Mines	1200	£5346 4 6	West Trethellan	51	£100 14 6
South Caradon	350	2145 1 0	Wh. Mary Consols	46	241 10 0
Par Consols	293	1496 4 0	North Downs	16	69 4 0
Tresavean	247	1262 5 0	Wh. Unity Wood	11	58 17 0
Creeg Braws	180	789 4 0	East Downs	7	42 14 0
Treleigh Consols	163	915 19 0	Wh. Tolgus	4	12 16 0
Wheal Brewer	115	179 10 0	Pembroke	1	10 17 6
South Tolgus	71	370 19 6			

Average Standard ....£100 9 0 | Average Produce 7½
Average Price per ton £4 15 0
Quantity of Ore ....2755 tons. | Quantity of Fine Copper, 205 tons 5 cwts.
Amount of Money £13,042 0 0
LAST SALE.—Average Standard........£ 91 7 0.—Average Produce...... 9½

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	111	£331 3 3
English Copper Company	321½	1364 18 9
Vivian and Sons	455½	2300 11 9
Freeman and Co.	287	1455 7 0
P. Grenfell and Sons	485½	1953 8 0
Sims, Willyams, and Co.	188	1148 0 6
Williams, Foster, and Co.	906½	4488 10 9
Total tons	2758	£13,042 0 0

Copper ores for sale on Thursday next, at Andrew's Hotel, Redruth.—Mines and Parcels.—North Roskear 924—Consolidated Mines 698—Tincroft 458—Fowey Consols 268—Wheal Seton 267—South Wheal Francis 221—South Roskear 168—Lanivet Consols 88—South Wheal Basset 65—Wheal Harriet 57—Wheal Vyvyan 39—Wheal Henry 30—Tretoil 20.—Total, 3203 tons.

Copper ores for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and Parcels.—Carn Brea Mines 815—Par Consols 294—Alfred Consols 266—Wheal Prosper 233—United Hills 185—Levant 174—Wheal Bucketts 117—West Wheal Treasury 91—Wheal Virgin 73—Wheal Agar 72—Botallack 59—North Wheal Basset 57—St. Ives Consols 23—Wheal Tremayne 20—Wheal Ayr 20—Spearn Moors 12—Todd's Regulus 10—North Wheal Abraham 6—Wheal Venture 5.—Total, 2532 tons.

COPPER ORES

At SWANSEA, for sale Nov. 4.—Copiapo 93, ditto 92, ditto 90, ditto 89.—Berehaven 107, ditto 103, ditto (Kellogue), 92.—Cobre 87, ditto 77, ditto 41, ditto 37.—Knockmahon 100, ditto 61.—Burra Burra 80, ditto 54, ditto 35, ditto 24.—New Zealand 30.—Burra Burra 26.—Total, 1318 tons.

On Saturday, the 16th inst., Messrs. John Schneider and Co., of London, the new proprietors of the Spitty Copper Works, near Swansea, gave a dinner to all the men employed in their establishment, amounting to about 160. The dinner was served in the Refinery, which was tastefully fitted up for the occasion. After dinner, the following toasts were enthusiastically drank—Her Majesty; the Prince of Wales; H. W. Schneider, Esq.; Mrs. H. Schneider; Mr. Napier, the patentee of the new process for smelting copper (and for the carrying out of which these works are taken); Mr. J. Williams, the manager, &c. The Llangennech band attended. The conduct of the men was admirable, and an excellent speech was made by one of them, to return thanks for the kindness and liberality of their new employers.

NOTICES TO CORRESPONDENTS.

It will at all times save much trouble, and frequently considerable delay, if communications are simply directed—

To the Editor,
Mining Journal Office,
26, Fleet-street, London.

Also, to avoid trouble, Post-Office Orders should always be made payable to William Salmon Mansell, as acting for the proprietors.

History and Practice of Mining in the British Isles.—Mr. R. Hunt, the Keeper of Mining Records, at the Museum of Practical Geology (to whom we were indebted for the interesting statistical details of the Lead Trade, published in last week's Journal), is delivering a course of lectures on this subject, at the Royal Institutions, Manchester and Liverpool; and which, we are glad to hear, are creating considerable interest. As Mr. Hunt contemplates repeating them at the London Institution, we think it better to defer our notices until then, when we shall be better able to do the lecturer justice, by more detailed reports.

Lanherrook Wheal Maria.—We have received a communication from Capt. J Tabb, in reference to the letter referred to last week, under this head. Mr. Tabb is indignant at the course adopted, and says—"If your correspondent has any grievances to complain of, or any charges to bring against me, let him do so openly, at the meetings of the shareholders, or to the committee, to whom alone I am responsible—and I trust I shall be able to answer him satisfactorily; but when he adopts the unmanly and cowardly method of attacking me anonymously, in a public journal, I feel confident that the public, as well as my employers, will consider such attacks beneath notice, and, with myself, treat them with contempt. Should your correspondent, however, adopt the course recommended by you, and appeal to the committee—which, however, I have strong reasons for doubting—I have no fear of the result; but should he, notwithstanding, persist in publishing his charges in your Journal, I have to request, that you will, in fairness to me, publish his name." As we expressed in our last, this is a matter for the committee of management, and with whom we leave it—regretting that such dissension should exist.

Wheal Andrew and Nanoulin.—"An Adventurer" complains that, in the unavoidable absence of the mine agent, Capt. W. Francis, the management of the underground operations is left to wholly incompetent persons, and that the workings are suffering greatly in consequence. This letter (as too many others we have lately received) should have been addressed to the committee of management, who, as being generally the largest shareholders, must, surely, be considered as interested in securing effective and economical management—underground and at surface—and would be found ready to adopt suggestions from shareholders for improving their system, or obtaining more competent officials. We court correspondence from all parts, and on all subjects, it is true—but we regret much the personalities many writers have of late indulged in, and which detract altogether from whatever value might otherwise attach to their letters.

—— (Shrewsbury).—Will our correspondent favour us with such particulars as he may be acquainted with, either respecting the Grits and Gravel Mines, or any others, to render the article on the Lead Trade perfect; and for which Mr. Hunt, as well as ourselves, will feel obliged.

"A. T."—Thanks for the notice—we are always glad to receive local information.

"T. H. W."—The inclination of the Lickey plane, upon the Birmingham and Gloucester Railway, is 1 in 37.

Received.—"A Traveller," on Mining in Ireland—"J. D. F.," Double-Action Pump—"J. T.," on Improved Railway Bridge—"J. E." (Llandybie), on Colliery Ventilation—T. Deakin, on "Hibernia's" Remark's on Mr. Sweetlove's Paper.

We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses; not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

The Mining Journal is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, OCTOBER 30, 1847.

"The revised Tariff of 1842 inflicted on the mines of Cornwall an annual loss of 300,000*l.* sterling!" says the *Cornwall Gazette* of the 23d inst. We apprehend this statement must be an inadvertency—a slip of the pen, a clerical error; for, as it stands, its reception as a truth is utterly and absolutely out of the question. If the *Gazette* will strike off the three right-hand figures, the residue will more accurately represent the actual loss to Cornwall by the Tariff regulations of 1842, than that which its present statement represents—a loss equal to that alleged by the *Gazette* would have resulted, not only in the stoppage of works in all the mines, which up to that time had been classed among the non-productive, which had been long paying a most attenuated dividend, and with respect to which a sinking of their works deeper would have been but a deeper sinking of money; but it would also, as we think, have resulted in the suspension of the whole mining operations of the county. This is our opinion; and we tender to the *Cornwall Gazette* our admission that, if a loss at all, approximating to the ponderous sum mentioned, fell on the mines of Cornwall by the measure of 1842, it is a fact on which may be founded the best argument we have yet seen for the reimposition, in all their plenitude, of the previous prohibitory duties on metals and ores of foreign origin. It grows out of this statement of our contemporary, as necessarily as acorns out of an oak branch—first, that the mining population of Cornwall have very little for which to thank the last Conservative Administration; and, secondly, if the mines of Cornwall can spare from their profits, at least, 1,500,000*l.* sterling in five years, and yet give to the shareholders, as they have, in the large majority of instances, done up to this day, a liberal half-yearly dividend, then must money, laid out in shares of this description, be capital the most adroitly and profitably directed of any which is occupied in feeding the most lucrative branches of our domestic industry.

We continue, in our present Number, a notice of the mines of Ireland, confining ourselves, however, to the Wicklow district. We are sorry to find, from correspondence received, that the information we augured would be so readily furnished, will, in some instances, be *withheld*. This is to be lamented, and were the proprietors or shareholders to consider their own interests, they would aid the cause we have in hand—that of directing public attention, and more especially that of Government, to the working of mines in Ireland, and thus giving employment to the peasantry. However, let them see to it. We merely wish for general information as pertains to the mines, and the encouragement which may be afforded to the capitalist. We are indebted to Mr. Barnes, for the main points as regards Ballymurtagh, in our present Journal; and we hope Mr. Williams (a scion of Michael Williams, Esq., of Scorrier House and Trevence), who is the purser on the mine, will not refuse the information required. We have much matter in hand, but should prefer receiving it from those possessing better information than ourselves. As regards Ballygahan, we doubt not but that we shall be in a position next week to give a full report. In thus adverting to these particular mines, in a manner which obviously is to draw the attention of the parties interested, we feel it incumbent to offer some few words. Within the past week, the heads of the Roman Catholic clergy, have had an interview with her Majesty's representative in the Sister Isle (the Lord Lieutenant of Ireland), in which they advert to the employment of the people; and, observing among other means, the development of the mineral riches with which that country is said to abound. We observed the other day that this was an important subject with regard to the application of English capital to Irish labour, and we repeat, that no more legitimate course could be adopted, inasmuch that the beneficial application of 50,000*l.* alone, although, we would say, even 500,000*l.*, would not only employ even ten times the number of those engaged, but, possibly, multiply them a hundred-fold.

We purpose next week giving a return of the mines of Ireland for the past three or four years; but, as the produce of many have not appeared in the Ticketing Papers, but sold through private channels, we shall feel obliged by the communications of parties, as to the sales which may have taken place, more especially as affects lead and sulphur ores.

We have again to impress on all those connected with the mines of Ireland, or interested therein, aiding us in the cause; while we have felt it our duty in upholding the mining interest, and, with the desire of promoting the happiness of Ireland, to take every step which we feel may be calculated to the advantage of that ill-fated country. We have accordingly addressed memorials to the Lord Lieutenant of Ireland, and the Government at home; and trust, if they have not fully the desired effect, they may at least attract attention, for the employment of the starving population, to a channel which may lead to profitable advantages to the country, and not be fruitlessly thrown away. It behoves all to use their best endeavours to help Ireland; and we believe that our exertions heretofore will acquit us of any disregard of its interests. We regret, however, to say that those who should put their shoulders to the wheel are found to be too much wanting; and while a slight effort on the part, as would be said in Cornwall, of "One and All," is not rendered, the interests of the country are neglected and sacrificed.

It must be well known that, during the late severe monetary pressure, when the difficulties attendant on raising money on the best securities, as applied to mercantile firms, were almost unprecedented, that of obtaining an advance, or "mortgage" on mining shares, was next to impossible—sacrifices being daily made to raise the funds by absolute sale, no matter what the sacrifice. Our readers will, doubtless, have remarked that "firms" (if *firms* they be), previously unknown, even by name or reputation, have unblushingly advertised, from day to day, their readiness to advance moneys to any amount on mining or railway shares. We can very well understand the object, and believe that those who have placed their confidence in the mine and railway pawnbrokers have only to make inquiry to arrive at the results from which we venture to draw our conclusions. Of the movements of some of these gentry (we understand that it is the intention to assume nine balls as the symbol, instead of three, generally used in London, and fifteen in Cornwall, being a medinm), we have heard a good deal; but a case has been brought under notice this week, which does certainly require, at least, a passing remark. We will endeavour to give it to our readers as it was given to us, for it is not our object to set down "aught in malice." A gentleman, requiring a loan, was recommended to a "firm" (?) in the City, to whom he applied for an advance of about half the market value upon a certain number of shares in two different mining companies. This the "firm" consented to lend, and requested that the shares might be left with them, and that the money should be ready for the party requiring the advance at one o'clock on the following day. The shares were accordingly left, and, in the afternoon of the same day, the money market experienced a check, from the circumstance of certain shares being forced upon it, at prices far below their value or the current price—the public naturally assuming, that from the reduced price at which the shares were offered, there was a "something wrong."

It so happened, however, as we are informed, that the very particular and individual gentleman, who had left the shares for the loan, was in a certain broker's office, when another of the fraternity entered, being instructed (as so represented) to sell a certain number of shares in two mines for *bank notes*, payable before one o'clock the next day, the number of shares, the particular mines, and the hour for payment, being strictly in accordance with the contemplated loan previously referred to.

The party to whom the shares belonged naturally felt that there was something "rotten in the state of Denmark," and, accordingly, proceeded to the house of business of the "firm;" and, to his great relief, recovered possession of his shares. This is a plain statement of facts as put before us—having every reliance on the parties from whom we acquired the information. If that we are misinformed, we shall only regret thus giving publicity to a system, which, we are afraid, is practised too frequent. We leave to our readers to determine what was the object or intent of the parties attempting to sell the shares. We do not mention names, and, therefore, do not subject ourselves to action for libel; but parties in the City have only to inquire to know to whom we refer.

The new structures recently completed in the borough of Truro, together with the improvements now in progress, and others which are in contemplation, will confirm to that town the station we believe it has long enjoyed, of being the metropolitan seat of the county. It is the place also where the business of the Duchy of Cornwall is principally transacted—where the Stannary Courts are usually holden—and where the stamping and authentication of the metallic produce of the district are completed. In addition to these features, so characteristic of a county town, it has recently issued a lively challenge to its elder sister of Bodmin, to produce claims equal to its town, in favour of its being selected as the place of an episcopal chair, in the event of the erection of Cornwall into a diocese. We think the challenge a very fair one, and such as cannot be satisfactorily answered by a knight not tolerably armed and mounted for the occasion. In point of fact, no answer has been given; and, considering its situation at the head of, and accessible to, all the mining centres of the county, and the chief masses of its population, it appears to us that, above all the other towns of that division of the kingdom, it is entitled also to that new ecclesiastical dignity which it seemed recently in the mind of Government to bestow. At all events, the new halls and offices are to be inaugurated with a great feast. This is quite to our mind; and we hope the banquet will be a full and a happy one. But there is a materially different consideration, which we take leave respectfully to suggest to all mayors, magistrates, commissioners, and others, to whose care is committed the health of towns, and particularly at this moment to those of Truro—have you, in the improvements completed, and in those now in progress, taken every precaution in your power to secure the health of the people whose municipal guardians you are? You know what kind of a pestilence is in other countries wasting the people at mid-day—you have had some experience of the fearful power of the foe—no amphitheatre of hills can keep him out—no frontier of rivers can stop his progress—no laws of quarantine, nor military cordons, are able to impede his march—

> "At his foreseen approach, already quake
> The Caspian kingdoms and Maeotian lake;
> Nile hears him knocking at his sevenfold gate,
> And seeks his secret springs, and fears his coming fate."

If he knock at the doors of your municipality, have you taken such measures as are calculated to moderate his sway, and to shorten his continuance among you? If not, your improvements, we fear, are ill done; and your additions, additions of evil.

On a late occasion, we briefly alluded to the great importance of the mineral produce of part our kingdom during our earliest commercial intercourse with foreign countries. We then reminded our readers that, in our natural condition, before we had yet raised any of those proud wooden walls, the mighty bulwarks of England's strength and protection—ere we had yet reached any important point in the scale of nations—centuries, in fact, before the fairy feet of genius and enterprise had been planted on our land—the "treasures of the earth" made us the favourite resort for trade by the then greatest people in the world. We shall now continue our observations on the same subject, and we are indebted for much of our information to a very valuable publication, entitled, Craik's *History of British Commerce*, and also to a small treatise on the *Treasures of the Earth*, by Messrs. Chambers, of Edinburgh, both of which we recommend to the perusal of all interested in such subjects. It would appear, that the first recorded notice of the Phœnician trade with Britain, was about 1000 years before the commencement of our era. Through their extended commerical connections, the metallic products of Britain are supposed to have been first distributed over the civilised world, and even carried by these enterprising traffickers to some of the most remote parts of the earth. It is related, by some of the ancients writers, that they were exported to India, and there exchanged for precious stones and pearls. The Phœnicians retained, for a long period, the exclusive possession of the trade with the British Islands, and even contrived to conceal their situation from all other nations—a fact clearly indicative of the great advantages they gained. On the discovery of the islands by the Romans, other countries participated in the trade, until, finally, Britain became a province of the Roman empire. During the time of which we have been speaking, it does not appear that we possessed any trading vessels of our own, but that we were merely resorted to by strangers as the native place of certain valuable commodities, and we maintained little or no interchange of visits with foreign shores. Even this partial intercourse with foreigners, however, could not fail to affect the manners of the inhabitants of the southern part of the kingdom, and to raise them very many degrees higher in civilisation than their northern countrymen. Among other articles which may have composed the exports of the most ancient British trade, tin, lead, and skins, are mentioned, although iron is expressly stated by Cæsar; and, even at that early period, Britain had become famed for war chariots, as some passages appear in the letters of Cicero to establish that fact. Our articles of import in those days, consisted probably of earthenware, salt, and articles of bronze. This latter article being a mixture of copper and tin, the tin was probably chiefly obtained from the Britons themselves; but the copper must have been the product of some other country—for it does not appear that the least knowledge existed of the abundance of copper which the island is now ascertained to contain. Our copper mines have, indeed, been wrought to any considerable extent only in very recent times.

We intend, as our space will admit, to lay before our readers, a few remarks on each of the different mineral products of the soil; but we shall postpone these considerations for the present, by simply remarking, with an able writer, "Commercial utility has, in general, fixed upon the known minerals their proper relative values, and has stamped them all, whether worth one penny or one pound per ton, as treasures of the earth."

At the last Cornwall sessions, a prisoner was convicted of the crime of taking and concealing ore, or what is technically called "kitting"—an offence so serious, that an Act was obtained entirely for Cornwall, to prevent its commission. Considering how important the detection and punishment of such offences are to the mining interests generally, as well as to the tributers in other pitches, it is to be hoped that the prisoner's conviction will operate as a warning to others, and as some protection to the adventurer, who, to our knowledge, is often induced to speculate for the public weal, as well as with a view to direct individual pecuniary advantage.

Railway from Valparaiso to Santiago de Chili.—The laying down of a railway from Valparaiso to Santiago (the capital of the republic of Chili) has been projected for some years, and several surveys made; but, hitherto, there have been drawbacks to its accomplishment, by interested parties, who have at present the carriage monopoly from that port to the chief city (holding official appointments); and large landowners along the main road, consequently, have strongly opposed a railway, which would take the traffic out of their hands. It appears, however, that the President is determined to encourage improvements of every description, and particularly those which will benefit the commerce of the country and the inhabitants—one of which is a railroad to the Liverpool of the republic, increasing annually in wealth and extent. A company of wealthy capitalists is now formed, assisted by the Government, which has allowed them the free cutting of the line, not only through the territory of the state, but made arrangements with the private landholders that no impediment shall be offered to the accomplishment of this national undertaking. Surveys and estimates have been made by experienced engineers; and the first sod will be cut at the commencement of 1848. Chili is one of the richest in metals and minerals of the South American republics, as gold, auriferous sand, and silver in a virgin state, are found in the magnificent Cordilleras of the Andes; in other parts, silver, platina, copper, lead, and coal, are known to exist to a very great extent, but unexplored, in consequence of the want of means of transit. The Government has seriously turned its attention to the encouragement of mining interprise, by offering concessions to adventurers who may wish to embark in working the hidden treasures, whether natives or aliens, under most advantageous terms; and several Americans, from the United States, have, it appears, applied for grants in different parts, where rich ores have been discovered, and will soon commence their operations. The construction of a railroad is looked upon by the Chilians as the forerunner to extensive speculations and improvements throughout the country especially under its high sanction. Chili, in consequence of its great distance, is but little known by Europeans, and, consequently, the field it offers to mining enterprise cannot, as yet, be appreciated; but the day is not far distant when its great natural resources will be turned to the best possible advantage, as the facilities of an intercourse with the Old World increase. The South Pacific Steam Navigation Company is augmenting its number of steamers; and, instead of running only once a month between Valparaiso, along the south western coast to Callao and Panama, it will be next year twice or thrice, according to circumstances. The railway across the Isthmus of Panama, now in progress, will be another opening for the mining and commercial development of Chili; and it is not at all improbable that the stupendous project of cutting a navigable ship canal across the Isthmus of Tehuantepec, to join the Pacific and the Atlantic, will, before many years, be successfully accomplished, as the subject is now before the Congress of the United States, and is one of the ambitious enterprises of "brother Jonathan," as it will throw open a vast traffic with India, China, South Australia, and New Zealand, which promise one day to become the most important mining and flourishing countries, as their resources are immense.

Commercial Prosperity of Penzance—(*From a Correspondent.*)—It may be worth your while, to notice a rather interesting fact in the present state of monetary affairs—viz.: that while Consols in London have gone from above above 90 to below 80, our Penzance Corporation securities are on the ascendant. The tolls and dues for one year were let on Wednesday last; harbour and pier dues, 2226*l.*; market ditto, 887*l.*—in all, 3113*l.*; last year they were let respectively for 1875*l.* and 811*l.*—in all, 2686*l.*: showing an increase of rent this year over the last of 76*l.* on market, and 351*l.* on quay—in all, 427*l.* This does not speak much in disparagement of commercial matters in the "far west."

Glamorganshire Iron and Coal Company—An Unfortunate Speculator.—Sir Francis C. Knowles, who was one of the trustees of the Marylebone Bank, which failed some years ago, appeared at the Court of Bankruptcy, on Thursday last, to obtain his certificate. It appeared that, although the bankrupt, who has been five years in prison, had traded as a brickmaker, shipowner, and banker, his principal engagements arose out of the Glamorgan Iron and Coal Company, into which concern he entered as a partner with Sir R. Price and Mr. Beckford Long. According to Sir F. C. Knowles's balance-sheet, this speculation was of the most promising description, and, if properly managed, would have more than enabled him to pay off all his debts. The bankrupt, in support of this statement, produced an affidavit made by Mr. Muskett, an ironmaster in Gloucester. This document alleged that the deponent, having examined samples of the produce of the mines, considered such mines to be of a superior nature, and capable of realising to the owners 20 per cent. per annum on the capital invested in the working of them. It then goes on to recite the reasons for coming to this conclusion, and shows the propriety of the speculation. Mr. Bagley, however, said, he would not occupy the time of the court, and more especially as no opposition was offered.—The Commissioner granted the certificate.

The "Cricket" Explosion.—The trial of the engineer, Heaseman, against whom the coroner's jury returned a verdict of manslaughter, was on Wednesday, on the application of Mr. Bodkin, postponed until next session, owing, it is stated, to the illness of a principal witness, Mr. Mecham. Since the finding of the verdict against Heaseman, very important evidence in his favour has been discovered—evidence which would, we are informed, entirely exonerate him from any charge of tying down the valves, which, it will be in the memory of our readers, was not even alleged to have been his practice. One of our correspondents has exerted himself greatly to arrive at a correct view of the cause of the explosion, and has ascertained facts which would prove, in conjunction with the extremely valuable evidence given by Mr. Thomas Lloyd, the Government engineer—evidence which, we much regret, was treated so coolly by the coroner's jury as not even to elicit from them any remark—that the explosion can be satisfactorily traced to other causes. Our correspondent (Mr. Baker), who accompanied the engineers on Heaseman's side at the coroner's request, when they inspected the vessel, has since minutely inspected the ruptured boiler on Mr. Smith's premises, at the wish of Mr. Humphreys, the counsel, to whom he has given his statement, in which that gentleman entirely concurs; and yet, although he is only the witness in favour of the accused—who, if found guilty of the charge, besides the punishment awarded by the Court, would be deprived, and justly so, of any employment hereafter—yet, strange to say, this (his principal) witness, even up to the present hour, has not been subpœnaed to give his evidence.

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

A great deal of interest exists in this part of the world, with respect to the contracts for the supply of 38,200 tons of coal to the Post-office, which are to be adjudged on the 12th November next, on the best terms that can be got. The shipowners of Havre, Dunkerque, and St. Malo have sent up numerously signed remonstrances to the Government against the conditions of the contract, on the ground that they do not contain a clause enacting that the coal shall be conveyed to its destination *exclusively in French vessels*; and these remonstrances have received the warm support of the Parisian press. This objection has been raised principally from the belief that the coal will be contracted for by *English* coalowners, and it would be a splendid windfall for the French mercantile navy to have to convey the immense quantity of nearly 40,000 tons to Calais, Corsica, Marseilles, Malta, Athens, Constantinople, and Alexandria—the places at which they will have to be deposited for the accommodation of the Post-office packets. But I hope that the French Government will have the common justice to resist the pretensions of the shipowners. In the first place, a compliance with their request would entail a heavy burden on the public; for it is notorious that the cost of conveying cargoes in French vessels is immensely greater than in English. In the next place, it would be a gross injustice to the English contractors; for notwithstanding the greater part of the extra expense would fall on the Government, yet some portion of it would inevitably fall on them, and thereby diminish their just profits. In the third place, such a condition would be a flagrant violation of the treaty of 1826, between England and France, by which it is provided that English and French vessels shall enjoy exactly the same privileges in the conveyance of their respective products. Thus far the French Government has shown no disposition to meet the views of the shipowners of Havre, and other places; and from what I hear, I think it is tolerably certain that it will adhere to the conditions of the contract, as they have been drawn up. But, as it is always well to be prepared for every contingency, I would recommend the English houses, which may have determined to make offers for the contract, to bring the matter under the attention of the English Government, in the event of any such condition, as that sought by the French shipowners, being laid down. From what I have seen of the Navigation Treaty of 1826, I have no doubt that it would be a gross violation of it; and the English Government certainly would not submit to it—for not only is it bound to see that, and every other, treaty strictly obeyed, but it is bound to prevent such an unwarrantable sacrifice of the interests of English shipping. But there is another view of the case, which is of importance to our coalowners. A compliance with the desire of French shipowners would naturally compel them to raise their prices, so as to cover the extra freight. This increase would almost assuredly have the effect of excluding them from the competition, by making their prices higher than those of the French. So that to the loss by our shipping of a freight of 40,000 tons, would probably have to be added the loss to our coalowners of a market for that vast quantity of coal.

The conditions of the contract are of the usual character. The 38,200 tons are to be delivered at the following destinations, in a period extending from 1st January to 31st October, 1848:—1200 tons at Calais; 300 tons at Agaccio; 300 at Bastia; 12,000 at Marseilles; 13,000 at Malta; 1000 at Athens; 2900 at Constantinople; 7500 at Alexandria. Though the probability is that the Post-office would prefer to receive English coal exclusively, yet the authorities have taken care in the printed conditions not to confine themselves to any such a condition. "The coal," they say, "must come in part either from the mines of France, of England, or of Belgium, and possess the quality of the coal of the pits of West Hartley in England, or Mons-Bossu in Belgium; and, in fact, from the same pits, and be of the quality of the coal of the pits of Cardiff." Special stipulations are laid down with respect to the coal from the French pits of La Grand' Combe. An offer to contract for any portion of the coal must be made in a sealed letter, to be presented on 12th November; if for the whole quantity, five several letters must be presented for the five lots into which it is divided. The offer must be made in a certain prescribed form. Caution-money must be deposited previous to 12th November. The persons, who cannot attend on the day of adjudication, must be represented by some one duly authorised. The individuals who obtain the contracts will have to double their caution-money, as a guarantee for the due execution of the contract. The coal is to be of first-rate quality, to be received and examined by a special commissioner at the different destinations, and all the expense and risk of conveyance, &c., are to be borne by the contractor. Payment for the coal is to be made as delivered. (Copies of the conditions, forms, &c., may be procured at the French Consulate at London, and at Newcastle-upon-Tyne.)

The miners of the coal-pits of Anzin have been for a short time on the strike, owing to a mere misunderstanding. Hitherto, it appears, the custom of the Anzin management has been to pay the men every fortnight on the very day on which the money became due; but as this was found to lead to confusion in the accounts, by not allowing sufficient time for the accounts of each particular pit to be drawn, it was resolved, that the payments should, for the future, only be made four or five days, after the expiration of the fortnight, as is usual in Belgium. But as the men would have been alarmed at being made to wait so long a time, all at once it was settled that the payments should at first be made only the day after the expiration of the fortnight. To the astonishment of every body, however, the men were so irritated at this delay of a few hours, that they abandoned the pits, though, when the matter was fairly explained to them, and they received their fortnight's pay, they returned to their work.

The Company of the Loire has established a newspaper at St. Etienne, to fight its cause.

In the month of August last, a company was formed for working certain mines in the Duchy of Nassau; but it appears not to have met with the expected success, for it has just been dissolved.

The accounts from St. Dizier, up to the 21st, are rather gloomy. Affairs were said to be in a bad state, and to be getting worse. *Fontes blanches* were offered at 155 fr. (6*l.* 4*s.*), to be delivered at St. Dizier.

A meeting of the shareholders of the Grand Montagne Company is to be held at three o'clock to-day. I shall attend it; and, if it be over before the closing of the Post-office, at five o'clock, will send you a brief account of the proceedings.

The *Moniteur Industriel* states, that, in digging a road from Brive to Saint Yrieux, tin was discovered almost in a native state. Sometime ago, tin was discovered in that locality, but was not worked, though it was declared to be of good quality.

Yesterday was fixed for the presentation of offers for the supply of the rails, required by the Minister of Public Works, for the railway from Versailles to Chartres. Notwithstanding the modifications introduced in the conditions—modifications far too favourable to the ironmasters—the Minister could not get contracts for the supply of all the rails, the prices demanded by the ironmasters being still far too high. A portion only of the rails was contracted for; but I have not yet been able to ascertain either the quantity or the price. The maximum fixed by the Minister, last week, was 13*l.* 16*s.* a ton; and yet that was not sufficient for these modest Frenchmen! The most moderate demand was 14*l.*, and some worthies actually asked for more than 15*l.*! I told you, last week, the price at which the chairs were contracted for. It was just 2*l.* 4*s.* per ton dearer than that at which the Belgian Government had contracted for similar articles, a few days previously.

Returns relative to imports and exports during the first nine months of the present year, were published, yesterday, by order of the Government. The quantity of copper imported during that period was 55,974 metrical quintals (there are 10 quintals to the English ton), of which 32,751 came from England, 5011 from Chili, 18,212 from different countries. In the first nine months of 1846, the importation of copper was 50,715 metrical quintals; and, in the same period of 1845, 76,107. The returns show a decline in the imports from England: in 1846, they were only 31,747 met. quin.; whilst, in 1845, they were 59,689. From Chili, the imports show an increase: in 1846, they were 5342 met. quin; and, in 1845, only 1549. From other places, they were 13,626 in 1846; and 14,919 in 1845. The imports of tin in the first nine months of the present year were 9863 met. quin; same period of 1846, 12,263; of 1845, 16,126. Of cast-iron, the imports were 725,925 met. quin. in the first nine months of 1847; 688,109 met. quin. in the same period of 1846; and only 408,163 met. quin. in 1845. From England, the imports were 241,778 met. quin., in 1847; 345,821, in 1846; 154,925, in 1845; from Belgium, 442,555, in 1847; 302,168, in 1846; 218,411, in 1845; and the remainder came from different places. Thus, the imports from Belgium have increased, whilst those from England, and other places, have diminished.

The imports of coal in the first nine months of the present year were 16,122,102 metrical quintals; same period of 1846, 15,231,732; of 1845, 15,894,279. From England, the imports were 10,266,384 met. quin. in 1847, 6,648,465 in 1846, 9,766,560 in 1845; from Belgium 4,243,964 in 1847, 5,213,938 in 1846, 4,722,736 in 1845; the rest was imported from the Zollverein and other places. Thus, British exportations of coal to France have increased, while those of France have diminished. Of zinc, the importations were 123,996 met. quin. during the first nine months of 1847, 70,758 during the same period of 1846, and 101,826 of 1845; these imports were made from the Zollverein, Belgium, the Hanse Towns, and other places. The imports of lead were 146,840 met. quin. in the first nine months of 1847, 213,830 in the same period of 1846, 161,831 in 1845. —*Paris, Wednesday.*

BELGIUM.—I omitted, in my last, to mention that our Government had contracted for a quantity of chairs for its railways, at the rate of 159 fr. 97 c. (6*l.* 8*s.*) per ton.

Our newspapers complain strongly of the excessive cost of conveying coal on the railways, especially when compared with the price which has recently been fixed on the Great Northern Railway of France. A ton of coal can be conveyed from our frontier to Paris for 8 fr., with a reduction on a large quantity; but to convey a ton the same distance on the Belgian lines, would cost three times as much.

Our metallurgic establishments are deriving profit from the desire which exists to construct vessels in iron. Shipbuilding in iron is rapidly on the increase in this country. The contract for a large iron steamer was put up to public competition a few days ago at Antwerp, when, to the surprise of most people, it was carried off by an establishment which had not previously embarked in that line—whilst the immense establishment of Cockerill, of Seraing, was defeated.

The Government has just published returns of the exports of rails, iron, coal, &c., during the first nine months of the present year, compared with the corresponding periods of 1846 and 1845. The increase on every item is very remarkable. The figures shall be given in my next.

MEETING OF THE GRAND MONTAGNE COMPANY.

A meeting of this company was held at Paris, on Wednesday afternoon, pursuant to notice. It was neither one of the regular yearly or half-yearly meetings, but was simply called to set before the shareholders a statement of the position of the company. The managing director read a long report, which commenced, by saying that unfavourable reports having been spread concerning the company, the directory conceived it to be their duty to enter into details, to show that they were false. He then went on to state the investigations which had been made to discover ore, and said, that they all had been crowned with great, and, in some cases, extraordinary, success. The workings were, he said, increasing in importance every day. The coal, lead, and other shafts were all very productive, and likely to become more so. The buildings, &c., for which great expenses had been incurred, had, nevertheless, cost less than had been expected. The company had already been able to reduce its expenses of manufacturing zinc, and of producing ore, and it was certain to be able to make hereafter much greater reductions. It had secured markets for its products in England, France, and Belgium, and, on the whole, its present position and future prospects were everything that could be desired. But, notwithstanding all that, it was in the greatest want of money to continue the works it had commenced, and the directors pressed earnestly on the shareholders the necessity of immediately paying up their calls, warning them that, if they did not do so, the shares would be sold on the Bourse; 40 shares had already been sold, and 200 were in arrear. If the calls in arrear were not paid up before Saturday, the shares, it was announced, would be sold on Monday. Some of the shareholders complained of no longer time being allowed; but it was answered, that three months had already been allowed, and that repeated applications, eight or nine in fact, had been made for payment of the calls, but in vain. The report read was ordered to be printed. In the course of a conversation which ensued, one of the directors stated, that when all the works, &c., of the company shall be in full operation, the profit on each ton of zinc sold will be 12*l.*

INSTITUTION OF MECHANICAL ENGINEERS.

A general meeting of the members of this institution was held at their rooms, in Temple-buildings, Birmingham, on Wednesday evening—the president, G. STEPHENSON, Esq., in the chair. The attendance of members was numerous, and included Mr. J. E. M'Connell; Mr. Humphries, of London; Mr. Cowper, of the London Works; Mr. Fothergill, of Manchester; Mr. Sleight, of Dudley; Mr. Alderman Geach, Mr. Burgess (Sharp, Brothers, and Co.), Mr. E. Tayleur, Mr. W. Buckle, Mr. C. Beyer, Mr. T. Richards, Mr. T. Gilson, Mr. J. E. Clift, Mr. G. A. Everett, Mr. J. Gray, Mr. H. Smith, Mr. W. Middleton, Mr. T. Walker, Mr. W. C. Crampton, Mr. J. Horton, Mr. S. Lloyd, Mr. B. Cheshire, Mr. A Knight, Mr. J. Brown, Mr. J. Henderson, Mr. R. Williams, Mr. N. S. Garland, &c.

The first subject introduced was by the chairman, and referred to an improved safety break for railway carriages. A model was placed upon the table, and by means of this Mr. Stephenson set forth his plan. He premised it with the observations that nothing but that which was simple could be applied to railways; that there they could have nothing of a complicated character. He explained that his object was, in case of need, to devise a means by which the momentum of the level of the carriages in a train could be suddenly checked, to prevent their forcing themselves upon the engine. He preferred, therefore, that the buffer should have a connection with the break of the wheels for stopping the train, because, when the break was put in gear, any pressure upon the buffer acted upon it. In the middle of the buffer-rod he proposed to fix a spiral-spring, the object being to lessen the concussion and jar of admitting the break too rashly, and thus bringing up the train suddenly and easily. Having explained with minuteness his plan, Mr. Stephenson remarked, that two others had been sent in, one from Mr. Alfred Knight (the son of Mr. Henry Knight, of Ann-street), but that these, though possessing great merit, were too complicated to be applied to the purpose for which they were designed.—A considerable discussion followed, in which the president, Mr. Humphries, Mr. Crampton, of London, Mr. Peacock, Mr. M'Connell, and others took part—the latter declaring his belief that, if Mr. Stephenson's break had been in operation, there would have been no lives lost in the accident at Wolverton; Mr. Humphries also declared it to be his opinion that Mr. Stephenson's plan was the best of the kind he had seen—at the same time, he expressed an opinion that they would never succeed in making the momentum of a train practically useful for breaking itself.—Ultimately, the consideration of the subject was adjourned until another meeting.

The next subject set down for discussion was "On the Practicability of Effecting a Mechanical Communication between the Guards and Engine-drivers of Railway Trains." On this subject a paper was also read from the president; and, having adverted to the schemes which had been proposed by other persons, he set forth his own plan. This was, that two guards should be placed on each train—one on the carriage next the engine-driver, and the other on the last carriage but one, facing each other; and having a red flag to hold by day, and a red lamp by night. If anything goes wrong, the signal could be immediately given; and by having a bell placed on the engine tender, with a cord carried to the first guard, he could alarm the driver by ringing the bell, without taking his eyes from the other guard. This plan, combined with the self-acting break, was, in his opinion, the simplest and most effectual means for ensuring the safety of the travelling public.—Mr. Stephenson added, that Mr. M'Connell had devised an improvement upon his plan, which was that of a guard's whistle, to be worked by means of electricity; and Mr. M'Connell remarked that the London and North-Western Company were preparing to carry this plan into operation.—This subject also elicited some useful discussion.

An interesting paper, on the subject of the Fan-blast, was read by Mr. Buckle, in the Soho Works, embodying some valuable information, the results of much experiment and observation. This paper was ordered to be printed for the institution.—Various other papers were read, one from Mr. Cowper, on Iron Suspension Bridges; another from Mr. Stephenson on the subject of an invention (of which the worthy president expressed his approval), by a Mr. Smith, of Nottingham, for Indicating the Strength of Steam in Steam-boilers, and peculiarly adapted for steam-boats.—After one or two other papers had been disposed of, the meeting adjourned—the institution having been previously declared to be in a flourishing condition, as was exemplified by the fact, that it now numbered 43 members. A vote of thanks was passed to the president with much applause, for his courtesy in presiding on this occasion, and for the interest he has taken in promoting the institution.—*Birmingham Advertiser.*

A new attempt to adjudicate 60,000 rails for the Chartres Railway, was made yesterday at the Hotel of the Minister of Public Works, but again without effect. Out of eight lots, into which the quantity was divided, only one was taken—the fifth—by M. Leclerc, of the iron-works of Bois-Tilleuil, near Maubeuge, at 344 fr. 10 c. The other tenders varied from 354 fr. 50 c. to 368 fr. And as the Minister's maximum was only 345 fr., they were necessarily all rejected. No day has been appointed for a new adjudication. The attendance of iron-masters was small.

THE MINING DISTRICTS AND MINES OF IRELAND.—No. III.

BALLYMURTAGH MINE.—Having in our last observed on the Connorree and Kilmacow Mines, forming the eastern part of the sulphur chain, passing through the Vale of Ovoca, we take a leap west across Cronebane, Tigrony, and Ballygahan, and at once proceed to remark on the Ballymurtagh Mine, which we believe is the most important, whether considered with relation to its produce of ore, or returns to the adventurers. From the remarks which precede the present, in our columns of the past fortnight, the position of the mine, and a description of the district, is unnecessary—and hence our observations will be mainly confined to the mine under notice, reserving, until a future occasion, our notice of those adjacent. This mine is one of the oldest, and, indeed we might add, the most extensively worked of any of the mineral deposits in Ireland—while it may be set down as one of the most regular, in point of productiveness or returns, judging, as we may fairly do, by the dividends declared from time to time, and which have been noticed in our columns, with an occasional notice of the progress made, and the prospects presented. The sulphur course here varies in width, or thickness, from 4 to 36 ft., and occasionally even exceeding the latter, in which lode, or range, are deposited beds of iron pyrites. These were, in the first instance, discovered close to the surface, and are now in course of raising in large quantities, from a depth exceeding 100 fms., or 600 ft. The sulphur ore thus obtained, alternates as to its quality and properties, in a great measure attributable to the proportion it holds to the copper contained, or its admixture, with the killas or country—it being, in some instances, so blended, or mixed up, as to form a conglomerate—the lode, however, taking its regular course, but swelling at times, and at others diminishing in size, much as is the ordinary case with lead veins, although not wearing out to a string, as is frequently met with in the latter. The average produce of the sulphur ore may be taken at 40 per cent.; and where it is in combination with copper ore of inferior quality, yielding a produce of about 2½ per cent., it is found to be harder, the copper ore being occasionally found in ribs, or veins, passing through or intersecting the lode. A striking characteristic attaching to the copper ores of this mine is, the intimate union which exists between the ores of pyrites and copper; at the same time, that they are frequently found distinct, as forming a channel, independent of the sulphur ore: and, by way of demonstration, we may observe, that, in many instances, these veins, or ribs of copper ore, run in a direction parallel with large beds, or deposits of pyrites, separated only by a few inches of black shale, though, at times, found at a greater distance—the copper ore so found being highly impregnated with sulphur—while the pyrites in the immediate vicinity carry with them a trace of copper. The workings in pursuit of, and raising, copper ores have, for many years, been of an extensive character, but varied, as to their results—the operations having been carried for about 300 fms. on the run, or course, of the lode—regular levels having been driven at intermediate spaces, or depths, of 10 fms.; which latter have been put down to a depth of 110 fms. under the deep adit. So far as we can gather information from those best acquainted with the nature of the lode, or branches, in this district (and we may here express our obligations to Mr. Barnes, the manager, for his polite attention on all occasions, as well as his readiness to afford information, which we should be happy were we to find it equally observed in other channels), it would appear, that the pyrites, or sulphur ore, does not hold in quantity much below 100 fms. from surface, from which point a marked change takes place in the deposits of copper ore, which then appear to have disconnected themselves with their former neighbours, and to have taken an independent course in progressing downwards. The ore below this point is found to be of better produce than at the higher levels; and, from the nature and extent of the present workings and tutwork bargains, in the bottom levels, it is clear that the agents and adventurers calculate on satisfactory returns, and in which, if we may judge from the general opinions entertained by practical men, they will not be disappointed. During the past few years, the raising of ores, including those of copper and sulphur, have exceeded 20,000 tons annually; and, from the state of the mine at the present moment, there is every reason to believe that a like supply can be furnished for a series of years to come—measures having been undertaken in opening the ground, whereby an extent of ore ground is laid open, so as to render it comparatively easy of extraction, and, at the same time, proving the lode. Two of the most interesting objects presented by this mine are, the new western shafts, which have been sunk perpendicularly about 140 fms. On one of these, an engine, of 50-in. cylinder, has been erected, with strong and well-adapted pitwork and machinery—the other being employed as a drawing shaft, going right down to the 110 fm. level, by which the produce will henceforth be raised. There are also two other steam-whims employed in drawing the ores from the other principal shafts. The number of persons employed on the mine average 700; and, as there has been, from time to time, a fair "sprinkling" of Cornish miners in the district—not to remark on the agents, who, we believe, with reference not only to this mine, but to others in the locality, are admitted to be good men "One and All"—such has much tended to improve the mode of working; the "natives," generally, having acquired sufficient skill and aptitude for the various operations. We may observe, in closing our brief notice, that the Wicklow Copper Mining Company have ever manifested an earnest desire to promote the interests of the peasantry, as well to contribute to their comforts, by affording employment, as those blessings attendant on education, and improving the minds and habits of the people. With this view, one of their latest acts has been that of opening a school at the mine. It will be remembered, that we adverted to a scheme of this nature in a late Journal, but of a more general nature—to which, when carried out, we cannot entertain a doubt but that the Wicklow Copper Mining Company will become liberal contributors.

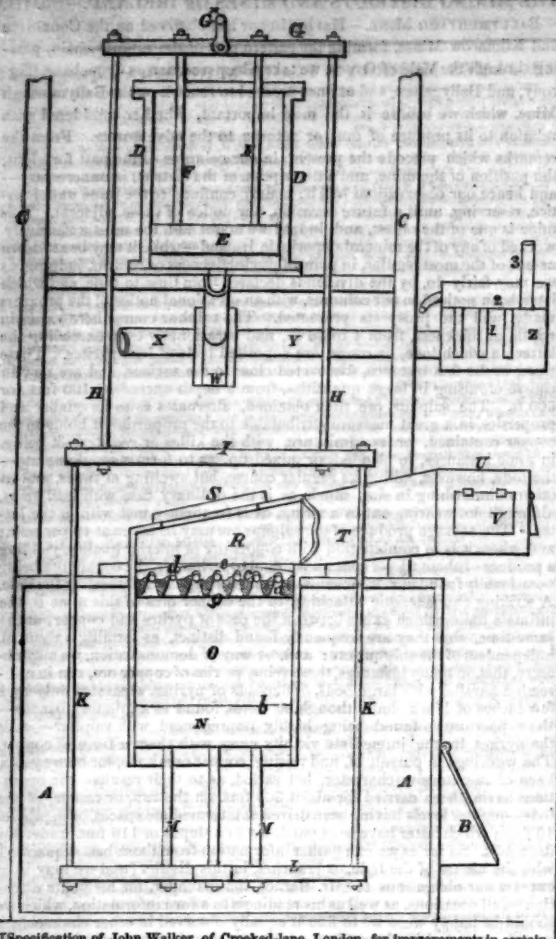
METALLIC PISTONS.—We have received a communication from Mr. Goodfellow, the patentee of a metallic piston (a long advertisement of which, with a description, appeared in the *Mining Journal* of the 2d inst.) in which he states the causes which led him first to turn his attention to the subject. It appears that, being engaged at Messrs. Thomas Ashton and Sons, Manchester, to keep the mill gearing moved by engines of 300-horse power always in order and repair, he continually found defects in the hempen piston from its exceeding tightness, when packed, taking a great portion of the power of the engine to move it, and overcome the friction, as well as the frequent repairs it required; and the metallic pistons then used consisting principally of rings, or layers of segments, pressing against the cylinder sides only by springs, which were very liable to get out of order, as well as acting in such manner, as to wear it untrue; and without action on the plates of the piston, it became liable to be worn out by pernicious water, and allow the steam to escape round the packing—thus preventing the engine from working up to her load, and consuming a deal more steam than was necessary. He then began to think seriously about a remedy for these defects, seeing the necessity of having a compound acting packing that would press upon the plates, as well as the cylinder; and, at length, accomplished the metallic piston, advertised on the 2d inst., as before stated. We are not sufficiently practically acquainted with the working of metallic pistons generally to give an opinion of their several merits; but it is evident, from the list of parties employing them, that they are in great demand.

DIRECT COMMUNICATION BY MEANS OF THE ELECTRO-MAGNETIC TELEGRAPH BETWEEN LONDON AND VIENNA.—Mr. C. F. Partington, professor of mechanical philosophy (who has just completed the laying down of the wire across Portsmouth Harbour, as an experiment), in the course of a lecture on the electro-magnetic telegraph, which he delivered on Thursday evening, at the Windsor Mechanics' Institution, stated that the whole of the arrangements had just been decided upon for opening a direct line of communication between London and the capital of Austria, by means of the electro-magnetic telegraph; so that news will be transmitted from Vienna to Whitehall in the space of a few seconds! The wire will be carried across the English Channel to France, and thence to Vienna. The consent of the different States, through which the wire will be laid down, has been obtained. It was also stated by Mr. Partington, that the whole work would be completed, and in working order, within 18 months, or two years at the farthest, from the present time.

LEFT-HANDED GRATITUDE BY A PUBLIC COMPANY.—Most of our readers are aware of the great convenience afforded by a pier attached to Vauxhall-bridge, for steam-boat passengers to land and embark. It has been opened for 2½ years, and in that time has produced 50 per cent. profit upon the outlay or cost of it. At the general meeting of the company in May last, the gentleman who proposed, contrived, and industriously attended to its construction, was turned out of the committee of directors, in which he had been for the last 15 years, through the machination of a cabal formed for that purpose. It remains to be seen, whether the next general meeting, convened for the 4th of Nov., will confirm the above determination of the last.

The celebrity of the first banking-house belongs, by common consent, to Mr. Francis Child—the books of the firm date back to 1620; Messrs. Hoares' to 1680; and Messrs. Snows' to 1685.

IMPROVEMENTS IN HYDRAULIC AND PNEUMATIC MACHINERY.



[Specification of John Walker, of Crooked-lane, London, for improvements in certain hydraulic and pneumatic machinery, and in application of steam, or other powers, thereto. Patent dated 20th April, 1847.]

This invention, which is comprised under two heads, consists of the following arrangements and combinations of parts—the first is as follows:—In the accompanying drawing, A A, marks a metal tank, having three sluice doors B, covering openings therein, either of which may be covered or uncovered at pleasure. Such tank is supported by a strong framing of wood, and upon the top of this tank are strong metal framings, C, which support and carry the several working parts of the machine, of which D D marks a steam cylinder, and there are two, placed side by side, fitted with suitable pistons, E, and piston-rods, F; to the upper part of these piston-rods, a cross-head, G, is attached, from each end of which there depend two rods, H H—the lower ends whereof are attached to a cross-head, I, from which there depends, in a similar manner to the cross-head, G, two rods, K; the lower ends of the last-mentioned rods are securely fixed to a cruciform-shaped piece, L, to which piece there are fixed four rods, M, with their upper extremities attached to a valve-piston, N, of peculiar construction, hereafter mentioned and exhibited in transverse and vertical section. O marks a water cylinder; there being two of them placed side by side, and fixed to the framing, P, as is the case with the steam cylinders, D D. The water cylinders, O O, are furnished at their upper ends with valves, Q, similar in construction to those in the pistons, N; and such valves are arranged and combined as follows:—*a* marks a grating, upon the outer edge of which there is shrunk a wrought-iron ring, *b*; and the lower edges of the bars, *c*, which form this grating, are made wider than the upper part, or seat, for the valves, *d*, to allow the water to pass freely—such valves being composed of metal tubes, plugged with wood; and they have free liberty of vertical movement, and are guided in their proper course by cross pieces, *e*, which embrace their ends; and immediately above the valves, Q, which are fixed at the tops of the cylinders, O, there is a box, R, furnished with a cover, S, over each valve; and to this box is attached a pipe, T, which terminates in a box, U, having three clacks, or sluice-doors, V, which can be opened or closed at pleasure. W marks a slide for regulating the admission of steam through the pipe, X, to the two cylinders, D D, alternately. Y, the eduction pipe, to which is attached a rectangular-shaped box, Z, arranged in the following manner:—1 1 mark a series of pipes, which extend to within a short distance of the bottom of the box, Z—the upper ends of such pipes being fixed in a partition plate, 2, as also is the eduction pipe, 3. The operations of this machine are as follows:—Steam, of the pressure of about 25 lbs. to the square inch, being admitted to the under side of one or other of the pistons, E, will cause it to ascend, and thereby impart motion to a crank shaft, through the medium of a connecting rod, G, and the upward movement of one piston will cause the downward movement of the other—the cranks upon the shaft being suitably placed to effect the same—and the heated air will pass alternately from one cylinder to the other by a valve, which connects the two cylinders together; and such movement of the pistons will impart motion to the valve pistons, N, in the water cylinders, O, through the agency of the rods and cross-heads before mentioned; and, assuming the tank, A, to be charged with water, and one of the valve-pistons, N, to be at the top of the water cylinder, the descent of such piston will cause the valves, or tubes, *d*, to be raised, and the water below them will pass until the piston has completed its downward stroke. The quantity of water which passes will depend upon the velocity of the piston, which, for raising water, the inventor states, he has found 70 revolutions per minute of the crank shaft to answer.

The piston is now ready to perform the upward stroke, by which movement the tubular valves, *d*, will be closed, and the body of water above them will be thereby raised, and forced through the opening in the valve, Q, the downward stroke of the piston causing the tubular valves in the valve-seats, Q, to be closed; and this will continue so long as the water in the tank is not lower than the bottom of the water cylinders. The water thus raised may be passed off through one or other of the sluice-doors in the box, according as the machinery is required to be used either for draining, irrigating, or raising, water. The waste steam from the cylinder passes into the box, Z, and the water from the cold-water pump passes through the pipe, 4, into the said box. The cold water, as it passes down the pipes, 11, becomes heated to the boiling point, or nearly so, in which state it is forced into the boiler by the hot-water pump, which receives motion from the crank-shaft. The inventor states that, in adapting this machine for pneumatic purposes, the cistern and box may be dispensed with; and the position of the piston and valve must be reversed, and the velocity of the crank-shaft should not be less than 120 revolutions per minute.

The *second* part of this invention consists in the application of vanes, mounted upon a spindle in sets, each set being placed in an opposite direction to the other. The inventor states that, although he has used flat vanes, he does not confine himself to them, as, in some instances, he prefers using vanes forming the segment of a screw, similar to those used for propelling boats. These vanes are mounted upon each end of a spindle, the periphery of which fit into a short cylinder, the ends whereof being open; and such cylinder is fixed within a box or cistern, at one side whereof is a suction-pipe; and, at the top of the open cylinder, there is attached a pipe, which is the exit pipe for the passage of water, or air. The said spindle may receive motion from manual or steam power; and the motion of the vanes in one direction will cause the water to be raised up one pipe, and a reverse movement of the vanes will raise it up the other pipe—the water, in the first instance, passing the openings between the vanes, through the open ends of the short cylinder, and, in the latter case, passing out at the ends of the cylinder, and down the suction-pipe. The velocity of this machine, when employed for raising water, should not be less than 150 revolutions per minute; and, when employed for pneumatic purposes, about 1400 revolutions per minute.

The inventor claims the combination and arrangement set forth as constituting improvements in certain hydraulic and pneumatic machines; and secondly, the combinations and arrangement of a high-pressure engine for such purposes.

Patent-office and Designs Registry, 210, Strand, Oct. 27.

Original Correspondence.

MINING IN ANGLESEY.

SIR,—This island is about 24 miles long from south-east to north-west, and from 18 to 20 miles from north-east to south-west, and, as it would appear, has been separated from the mainland by a channel of broken ground, lode, or flookan, running from north-east to south-west, forming the Menai Straits: this channel running direct to the Llandidno Bay, leaving the Great Ormshead and Anglesey—both, at one period, islands; but the tide in the Menai Straits has the direct tendency of keeping it open, and even enlarging it, while that of Llandidno has been to fill it up. This island, geologically speaking, is composed of clay-slate, on the south-east side, for 7 or 8 miles, in a north-west direction. When, in travelling on the Great Holyhead road, the little coal-field appears running from south-east to north-west, about 2 miles wide, and under it the channel of limestone underlying it, from 4 to 5 miles wide, is crossed—therefore, showing a "hollow," or "basin," in the primitive clay-slate, from 6 to 7 miles from south-east to north-west, extending from side to side of the island, filled to some depth with limestone, underlying the coals, which, in that country, may be considered as fair workable coals, both giving great advantage to the agriculturalists. Leaving the coal-field, you travel about 8 or 10 miles, in nearly a north direction, over the clay-slate, to the celebrated great mines, called the Parys and Mona Mines, situated in the Parys Mountain, which have been in full work for nearly fifty years; formerly yielding immense quantities of inferior copper ore, but at this time about 25,000*l.* per annum, for both mines—therefore, the returns may be fairly estimated at about 2,000,000*l.*, affording an immense amount of labour to miners, smelters, carriers, shipping, and (from the nature of this particular deposit) to scientific men.

In the eastern part of the Mona Mine will be found the junction of 6 or 7 fm. lodes or veins—all separating from each other in going to the east, on nearly the whole of them. Great efforts and trials have been made, by sinkings, driving, and every other means that could be devised by prudence and skill, in search of other bunches of ore; but, up to this time, although good specimens of copper have been found on nearly the whole of them, nothing worth pursuing, or that would pay the expense of working, has been found. I will now endeavour to give a short outline of the great mines, and their workings, so far as the spending of a few hours only on the spot will enable me to do. The lodes before-mentioned, forming the junction, was the commencement of a great channel of ore ground, extending, in a westerly direction, from 200 to 300 fms., varying in width from 20 to 50 fms.; worked, generally speaking, open-cast, for 30 fms. deep, but, in places, from 50 to 60 fms., yielding the great quantity of ore before described. It may be well here to observe, that the country, to a considerable extent, on either side of the worked ground, has become changed from its original properties—now possessing copper, in minute particles, throughout each stratum contained in the stone, ready for dispensation, in contact with anything of a moist kind, having strength to abstract and separate it, from which, in the shape of precipitate, an astonishing return is made. In this department, great skill is required, and I will assume the managers to possess all the ability for their arduous undertaking. I believe, in no part of the kingdom, are mines, on the whole, better conducted. I must, therefore, say something more relative to theory, which, without being combined with practice, amounts to but little of sterling worth, as far as regards mining. There are water and fire theories; but neither one will hold good to be taken as a general rule; and nothing short of *practice* can be of much assistance. So far as I have seen of mining, it cannot be reduced to any general rule. Theoretical men will tell practical ones, differing from them, that theirs are practical prejudices. Believe them who can. That practice and theory combined are far better than either one separate from the other, must be admitted; such assertions, evidently wishing to disunite the combination of practice and theory in the same person. Having deviated from the point intended to be explained, I return to the theory of this great deposit of copper, and, to a certain extent, my idea of the cause. I will, therefore, attribute the strongly mineralized rock, in which the lodes have taken place, to the junction of the several lodes before described; that the country has become broken and weakened in that particular part, and at internal convulsions; that a giving away in this particular part has served, for a considerable period of time, as the channel through which great internal heat had discharged itself; reducing the quality of the ore so deposited, throwing its evaporation, or fusion, in copper fumes, in minute particles, meeting minerals in solution, giving facility to the deposit in the broken or fractured sides. This having taken place at different periods, at others the channel having become shut up, and enriching itself, and again reducing itself in quality with the outbreak, will serve, as my theory, for the rocks on either side of the vein being found so strongly mineralized. Where there is an evidence of great heat, the country adjoining the vein will be found to produce precipitate of copper; and, where precipitate of copper is to be found in abundance, or even in small quantities, there is the strongest proof of much heat having there existed. In support of this theory, it may be borne in mind that, within 2000 years, more than 800 volcanoes were known to exist in the world! while, at this time, there are less than 200—evidently showing the strengthening of the crust, or exterior, of the globe, and the diminishing of the strength of the internal heat. I will mention a few proofs, relative to the rise of the thermometer in descending the mines in the different rocks which I have seen; and will, therefore, take it as an approximation to a general rule, calling the rise about 1° for every 7 or 8 fms. descended, the thermometer standing 10 fms. deep. In the granite, about 55°; in and out of water the same. In the primitive clay-slate, it stands about the same. In the limestone, I have seen it as low as 49°. In the schistose, it rises from 60°, at 10 fms., to 96°, at 250 or 260 fms., deep. I have felt the heat very great in some of the great sulphur mines in the clay-slate, at 50 or 60 fms. deep,—equal to the greatest heat experienced in the deepest mines in Cornwall. The fact of heat having a great deal to do with the formation of ores of all descriptions, as well as the formation of malleable copper, which has been recently found very near a "tarn," or, more properly speaking, a crater, in Coniston Mines, Lancashire; by the Gold Stream and Mines, in the magnetic iron lode of Wicklow, Ireland; and by the extraction of 8,000*l.* or 10,000*l.* worth of native silver, from a cross-course in Herland Mines, Gwinear, Cornwall, 45 years ago—is fairly established. I might mention several other mines, producing similar effects; but those named will answer my purpose for the present; and I will, therefore, return to Anglesey, where yet several deposits similar to the one in Parys Mountain may be found; and the first object of the miner should be to look out for like causes—such being found, a similar effect may be hoped for. Returning to Bangor, I gave myself an hour to look at the most beautiful and scientific structure ever exhibited—the present suspension bridge over the Straits. That every bar, pin, and nail, is made from true mathematical principles, there can be no doubt; and it is only for the casual observer to compare this structure with the Hungerford Bridge, so much more recently erected, to see its beauties. In contemplating the second magnificent structure across the Strait, it brought to my recollection the Thames Tunnel, and a surprise that a similar structure should not have been made across the Strait, even in ages gone by, before arts and sciences arrived at their present pitch. This brought me to the Llandidno Bay, connected with this Strait, and the productiveness of the mines adjoining it; and its parallel direction with the run of mines in Parys Mountain, and the probability, or possibility, of the existence of minerals in the channel or lode forming the Strait. I examined the country on each side, but merely found the south-east side to be a little uplifted, which is commonly found in lodes, particularly where the underlaying is at all considerable. The surface of this channel, or lode, everywhere in the rocks where it could be expected to appear, is under water; and I can only give this rough outline, which, I trust, may be a hint to miners to examine it at low water. In spring-tides, should a course of copper, or other mineral, exist as suggested, it may be worked without much difficulty.—A TRAVELLER: *Oct.* 21.

THE COPPER MINERS' COMPANY.

SIR,—The perusal of the many embarrassments daily occurring must occasion great anxiety and apprehension generally; but there is one in particular, to which your valuable paper has drawn public attention, and in which we are locally interested—I mean the statement furnished to the public journals, explanatory of the circumstances of the "English Copper Company." Connected, as are the interests of this district, with the proceedings of that company, it has occurred to me, that the miner should receive a guarantee, as well as the Bank of England; this I conceive is due to the sellers of copper ores, from the statement which emanated from the special meeting of that company, wherein it is stated that not only the property of the company was mortgaged to the *Bank*, but that collateral security was given. I say, ought not these alarming facts to dictate to the miners of this county? Would you, or any of your readers, inform me if security, in any one instance, has been extended to the miners? It has struck me, that an alteration in the firm would meet the case—say, *Bank of England Copper Company.*—ONE CONCERNED: *Pool, Oct.* 25.

SPEAKING PIPES, FOR MINING AND RAILWAY PURPOSES, &c.

SIR,—Allow me, through the medium of your valuable Journal, to suggest the adoption of a speaking pipe, made of galvanised India-rubber, to enable those employed in the levels of mines and coal-pits to communicate with their fellow-men on *terra firma*. A tube of the said material could be made of any length and diameter, and would not be affected by wet or air. It could be let down like a rope to the bottom of the shaft, and carried along the levels to any distance; and its upper end would be so placed, as to ensure the attention of the persons attending the pit. For a speaking pipe, I consider that the above substance is far superior to any metallic substance—for the sonorous nature of the latter, drowns, as it were, the voice, and, at long distances, it becomes quite indistinct; whereas, in the former case, the voice, transmitted through the tube, retains the articulation in its most perfect and clear form; and, as far as my experiment went, I could not perceive that the sound was in the least deadened. A speaking tube, made of the above substance, would also enable the guards to communicate with the engine-drivers, and *vice versâ*. It could be carried along the roofs of the carriages like a rope from the engine to the rearmost carriage, and put up and removed with very little trouble; and its pliability would enable it to assume the disposition of the train, without interfering with its operations; in large establishments, also, a speaking pipe of this material might be advantageously employed. If you think the above suggestions deserving further consideration, I hope that you will kindly favour them with an early insertion. OWEN ROWLAND.

Heathcote-street, Mecklenburgh-square, Oct. 26.

ON THE VENTILATION OF COAL MINES—MR SWEETLOVE.

SIR,—Having read, in your Journal of the 9th inst., an account of a lecture delivered by Mr. Sweetlove, at a meeting of the Liverpool Polytechnic Society, on the important subject of the ventilation of coal mines, wherein is a recommendation of a plan for removing the explosive gas separately, without interfering prejudicially with the ordinary ventilation of the mine, I trust you will allow me, through the medium of your columns, to add the testimony contained in the following letter, from Mr. John Ridyard (who has, for many years, had the local management of the Bridgewater Trust Collieries, near Worsley, Lancashire, and who is justly entitled to the merit of the application, so far back as the year 1837, of the principle alluded to in Mr. Sweetlove's lecture), to the success of this method, under certain circumstances. Mr. Ridyard has, at my desire, given me the following particulars.—FERRDAY SMITH: *Manchester, Oct.* 23.

LETTER FROM MR. RIDYARD TO MR. FERRDAY SMITH.

SIR,—As requested, I herewith send you particulars of the inflammable gas we collected and piped out of the pit at Worsley, in February, 1837. Our downcast pipe was 112 yards deep, from which level we were then working the Brassy Mine. From the bottom of this pit, we commenced a tunnel, in metal, 4½ feet wide, on the rise of the strata, to get at the seven-feet mine, which lies 27 yards below the Brassy. This tunnel made a considerable quantity of gas; and when about 6 feet perpendicular from the coal, it lifted up the floor, and filled all the workings, so as to prevent us working in any part of the pit. We had, then, some 1¼-inch gas-pipes in store, which we put in the pit, and through a dam which we made in the tunnel, near the mouth or entrance. These pipes were soon found to be too small, and we put in another set, made of wood, 4 inches square, inside. Both sets were brought to the top of the head-gearing, and a perforated sheet-iron pipe, or rose, put on the top, where the gas was lighted, and kept constantly burning, for several months, which could be seen, like a furnace, for miles round. After putting in the pipes, we commenced working the pit again—and all appeared quite as safe as before the extra gas was encountered.—JOHN RIDYARD: *Worsley, Oct.* 22.

ON THE VENTILATION OF COAL MINES.

SIR,—I am gratified that the paper "On the Ventilation of Coal Mines," which you did me the honour to publish in the *Mining Journal*, of the 9th inst., has elicited remarks from several correspondents, who seem to have a practical acquaintance with the subject. In one instance, however, the tone of the remarks is not altogether of the dispassionate and courteous character that should distinguish such discussion. The "long article which has been drawn up by *a* Mr. Sweetlove," as your correspondent, "D.," writes, seems to have irritated that gentleman's feelings, rather than excited his reason. The mis-statements which occur in his communication respecting my paper, show that he cannot have read it with the attention he admits the *subject* deserves. It is nowhere stated in the paper, that the "fabulous" mode of firing off gas exists in Staffordshire, or elsewhere, "in these days." Neither do I "laud" Mr. Ryan's plan farther than to say, that the main principle is the right one: on the contrary, I point out its defects. The statement, too, concerning the opposition offered to the introduction of Mr. Ryan's plan, in which "D." says I am "completely mistaken," are not mine, but Mr. Ryan's: so that the mistake, if any, must also be his. *Suum cuique* is a maxim it is as proper to observe in the administering of censure as in the bestowing of commendation. "D." has, however, omitted to shew that, "in these statements," any one is mistaken "completely," or partially; and he will pardon me if I suggest, that the imputation conveyed against his own locality may have excited feelings in his mind unfavourable to a calm survey of fact. The ultimate reception of an invention is not inconsistent with the most strenuous early opposition to it; and "D." will find, on referring to the paper, that Mr. Ryan says he did, at length, obtain a trial for his plan; for which, however, he was more indebted to the influence of Sir John Sinclair than to the enlightened appreciation of it by the parties more immediately concerned. "D.'s" surprise at my boldness in "venturing to broach such a subject," being, as he insinuates, wholly ignorant of mining operations, is, itself, somewhat surprising, seeing that he has just stated my description of the plan generally adopted in the north of England (Mr. Buddle's) is "apposite and consistent;" and further, the paper makes especial reference to the faults and other irregularities of mines—my imputed ignorance of which is made the foundation of the charge of this surprising boldness! His sneer, too, at the "equally uninformed" condition of the "assembly of persons," before whom I, the "sanguine theorist," broached my "imaginary system," is as rude as inopportune. Several "persons," intimately acquainted with coal mines, were present on the occasion he so politely refers to; and one of them, who had been a manager of an extensive colliery seven years, was credulous enough, as "D." may learn from the paper, to speak approvingly of the "imaginary system" he so facetiously criticises! The Liverpool Polytechnic Society is not in quite so benighted a state on the subject as the Northumbrian critic supposes. I have assumed that your correspondent is a practical man. It is the constant practice of your "practical men" to sneer at theory, and this in a spirit of disparagement directly proportional to his ignorance of its nature. It would have been more profitable to your readers, and, therefore, more satisfactory to yourself, if "D." had indulged in this habit of his class less, and applied his acumen more to the subject of the paper he professes to remark upon. One short paragraph in his long letter is all that makes useful reference to his subject. The "mistake" into which Dr. Faraday and I have equally fallen on the matter of "piping," is dismissed by "D." with a few words of his own. "Without," says he, "condescending to notice the incapability of any reasonably-sized pipe effecting any such object, Mr. Sweetlove must be told that the application is an impossibility." Certainly, if the main fact were an impossibility, all criticism of its detail would be superfluous. But this impossibility is the question at issue, and to assume this is to beg the whole question. "D." would have been well employed in proving this impossibility; and, without wishing, in the smallest degree, to disparage his claim to any exemption to be conferred by distinguished station, I may be permitted to express my conviction, that it would not have been a condescension in your correspondent to "notice" any error into which Dr. Farsday may fall.

If "D." had honoured the benighted members of the Liverpool Polytechnic Society with his company on the evening of the paper being read, he would have found that I am already acquainted with his "invariable law of Nature," and something more, of which he appears uninformed. I cannot acquiesce in the opinion, that my proposed induction pipe, "instead of conveying the gas from certain pot-holes, would at once be filled with the general air of the mine." The hydro-carbon gas to be removed has a specific gravity of about 0·55, that of air being 1·0; this levity of the former would cause it to occupy the higher part of the passages, and flow onward with the general current in a distinct superstratum, with no more admixture than that arising from its diffusiveness. Any pipe, therefore, dipping into this superstratum, would be first filled with it, to the entire exclusion of the heavier substratum, and so remain, if the supply of the lighter gas were equal to the capacity of the pipe—conditions very easily fulfilled.

Supposing, however, such were not the conditions of the moving fluids, sufficient insulation would be afforded by the funnel openings I propose to employ, if properly adjusted. This objection of your correspondent, "D.," refers only to the lateral induction pipes, which blowers may render necessary. Of the main pipes, which drain the goaves, no notice is taken. Allusion is, indeed, made to reviews of the plan, proposed by Dr. Faraday and Mr. Lyell, by Mr. Mather and Mr. Dunn. Not having seen the reviews in question, I cannot determine how far they "have shown any system of piping, as applicable to an extensive colliery, to be totally impracticable," as stated by "D." I have made an effort to obtain them, but have not yet succeeded in doing so; and, until I have read them, I feel disposed to doubt the "success" of their undertaking. The grateful panegyric pronounced by "D." on Sir H. De la Beche and Dr. Lyon Playfair—who, it appears, could suggest nothing better in their report than a careful carrying out of the old plans of ventilation—is an amusing contrast with his treatment of what he calls the "system of piping." It is probably intended as a species of moral compensation for the unsparing severity towards the latter, and to show the natural kindness of his disposition. One inference, at least, may certainly be drawn from it, which is, that the inertia of habit keeps your correspondent, "D.," in the beaten path of routine.

The claim put forward by "Scrutator" to a publication of the same principle of ventilation, 12 months ago, shows how far we agree on the subject. I will not dispute the priority of the invention with him—being more anxious about the utility of the plan than the honour of its discovery.

The candid tone and courteous style of your third correspondent, "B. B.," claim my acknowledgments, and earnest concurrence in the wish, that it should elicit the unprejudiced opinion of practical men in Newcastle, or elsewhere. "B. B." has fallen into one or two misconceptions of my views, which it may be proper to remove. "It would seem (he says) that carburetted hydrogen is thought to be a gas having but slight affinity for the atmospheric air of mines." If he will consult the paper as printed in your columns, he will find it stated, that "carburetted hydrogen has a considerable diffusive power;" and that this property is the source of a large part of its danger. This diffusive power of the gases is in the inverse ratio of the square root of their densities. The specific gravity of carburetted hydrogen being known (0·55), its affinity for atmospheric air may be computed. That portions of the pipes would require occasional adjustment, I am aware, and have so stated in the paper, and regret that the evil does not admit of entire removal. This adjustment would not, I conceive, be either very troublesome or expensive. The reliance placed by "B. B." on the old method of dilution by air currents, is daily shown to be fallacious. In the working of mines, parts are being withdrawn from the course of general air circulation. In these parts, the dangerous gas speedily accumulates, and here, experience shows, arises the danger. Explosions generally occur in the neighbourhood of goaves, which the air currents cannot reach. Could the walling-up of goaves keep full pace with their formation, it would greatly lessen their danger; but, as this cannot be the case, some remedy must be provided which recognises their existence. Another misapprehension of "B. B." is, that my plan requires "pumps" to carry on the atmospheric ventilation. It only requires "pipes and pumps" for the removal of the hydro-carbon gas, and will cause the circulation of the air currents by the present mode. Much stress is laid on the "expense" of the plan proposed in my paper. This, it seems to me, is greatly exaggerated. No estimate of it can, however, be formed until the extent of the work to be done is known; but as the materials need not be expensive, the cost cannot be great. If the plan is admitted to be the only efficient one, as I believe it is in principle, the expense of carrying it out does not form a legitimate element of the question. Although economy of production is to be considered in every process of manufacture, no comparison can be instituted between the value of money and human life.—JOHN SWEETLOVE: *Bourton, Liverpool, Oct.* 20.

ADCOCK'S SPRAY PUMP.

SIR,—Mr. James Brown, the author of the letter under that signature, in your last week's Journal, is the brother of Mr. Thomas Brown, the managing partner of the Ebbw Vale Iron Company—at the head of which is Mr. Abraham Darby, one of the most kind-hearted and most amiable men, whom it has ever been my good fortune to encounter. From my intercourse with Mr. Abraham Darby, I have thought that I might consider, and I have considered, him amongst the number of my friends. With Mr. Thomas Brown, also, I have, for years, been on terms of great kindness and intimacy, and with and towards him, I never had an angry word, thought, feeling, or expression. A few words of explanation would enable me to account satisfactorily for Mr. James Brown's hostility towards me; but, out of regard for his brother (Mr. Thomas Brown), I forbear from entering into particulars, nor shall I do so, unless challenged and provoked by Mr. Thomas Brown. I wish it to be understood, that I do not accuse Mr. Thomas Brown, and still less Mr. Abraham Darby, for participating in the attack made upon me last week by Mr. James Brown.—REGINALD J. BLEWITT: *Oct.* 26.

[With this letter, the discussion between Mr. Blewitt and Mr. Brown must end. Besides the following letter from Mr. Calvert, we have two others—"AN Ironmaster" (Aberdare), and "J. W." (Wicklow)—calling for a statement of the work done, power employed, coal consumed, &c., by the spray pump at Llanhiddel, and which information, being generally useful, we shall be happy to give a place for in the Journal.]

ADCOCK'S SPRAY PUMP.

SIR,—I am sorry to find, that the rational, and really useful, discussion on the merits of the spray pump should be turned into ungentlemanly vituperation between Mr. Blewitt and Mr. Brown. In common with many of your readers, I seek for information—being in some doubt whether the pump has performed equal to the representations of the patentee. I have a powerful steam-engine (180-horse), which I am going to put up at a new colliery, and should wish to adopt the spray principle; but I must have facts established, before venturing my money in new pumps, which may turn out useless. Now, I should feel obliged to Mr. Blewitt, if he would inform me, through your columns, if the spray pump is in operation, and can be seen—when I will take an opportunity of visiting his works.—JOHN CALVERT: *Newbridge Coal-Works, near Cardiff, Oct.* 25.

ADCOCK'S SPRAY PUMP.

SIR,—From seeing Mr. Adcock's advertisement in your Journal, stating that his spray pump was in successful operation at Llanhiddel, I was induced lately to visit that place, and the following plain statement of its progress may be of some interest to your readers:—The information I received on the spot was, that the spray pump had been in operation since June last—that the depth sunk since that time was 11 feet, and that the flow of water into the pit was 600 gallons per minute. The spray pump was not in operation at the time of my visit—some repairs being necessary to the boilers and the machinery connecting the spray pump with the engine—which latter had been nearly pulled down—partly from the connecting-rod being too short, and partly from the engine having been driven at too great a speed. I was told it would be a month before the pump could be put into operation. Fourteen sinkers have been employed for four months in sinking 11 feet: reckoning these men to receive 1*l.* per week each, and 16 weeks to have elapsed, the "successful operation" of the spray pump will be found to have sunk the pit at the rate of 8¼ inches per week, and at a cost of more than 60*l.* per yard for *sinkers' wages alone*. Comment upon this is perfectly unnecessary to any practical man.

The great mistake committed at Llanhiddel has been in putting in too small a set of pumps at the first (only 12 inches bore). A 36-inch high-pressure engine, with 6-feet stroke, and going 17 strokes per minute, ought to raise 1000 gallons of water from a depth of 60 yards, which is the estimated depth of the pit, when completed.

If, therefore, Mr. Blewit wishes to have his pit working coals in the *present* generation, he must pull down the spray pump, and all its appendages, without delay. His engine is of sufficient power, if properly applied, to work an 18-inch set of pumps, to a depth of 60 yards, and going 17 strokes per minute would command nearly double the present quantity of water. This would complete his winning effectually; and I have no doubt, from the nature of the strata in the pit, that the water will gradually drain off, and decrease as the sinking proceeds.—A NEWCASTLE COLLIER: *Nantyglo, Oct.* 11.

ADCOCK'S SPRAY PUMP.

SIR,—During the last few weeks, several letters have been inserted in the *Mining Journal* and the *Mechanics' Magazine*, relative to my patented invention, the "Spray Pump." Were I to answer the two publications separately, my replies to the writers in the one, would assimilate to, and be closely interwoven with, my replies to the writers in the other. Hence, Sir, under the peculiarities of the case, I think it will be far better for me, and more interesting to your readers, if I solicit sufficient space to make one general reply.

The writers in the two publications may be classified thus:—1. Those who, having weighed the nature of my invention, *calmly and dispassionately* put forth inquiries to elicit further information; and, 2. Those who make direct charges against its value and efficiency. Within the range of the first category, we may enumerate "J. M——s," of Battersea—"An Inquirer," of Bermondsey—"B. Adams," of Islington—"Wm. Radley" —and "S. S." And within those of the second—"A Rhondda Collier," purporting to direct his letters from Cardiff—"James Brown," of Newbridge—"Cassell Morlais"—and a person writing under the fictitious signature, "J. Phillips," Greenwich.

Now, Sir, permit me to say, that, of those who have written against the spray pump, there are but two who make the slightest pretence to having seen it in operation, at Llanhiddel, and, as one of them asserts that he has seen the apparatus twice, and the other several times; and as both profess to be actuated by one motive only—*the development of truth*—their statements ought, certainly, to coincide. How far such is the case, may be known by the following statements of Mr. James Brown and "Cassell Morlais":—

	Mr. J. Brown's.	*"Cassell Morlais's."*
Diameter of blast cylinder	50 inches	48½ and 50 in.
No. of double strokes per minute—6 feet each	16	20
Average quantity of water flowing into the pit per min.	600 gals.	1874 gals.
Height of the lift of water by the spray pump	54 feet	20 feet
Water, in horse-power, raised per minute	15	4
Horse-power employed to raise it	90	54

If, Mr. Editor, two witnesses, such as these, gave similarly contradictory evidence in a court of law, I think, we may fairly assume, that no credence would be given to the statements of either; and yet it is on such evidence as this, that the merit of my invention has been *impugned*; gentlemen of undoubted honour and position in society *libelled*; orders that would have been given to me *prevented*;* and the commercial value of my property *lessened*.

Mr. James Brown and "Cassell Morlais," must excuse me, when I state, they must either be very ignorant of the power consumed by blast-cylinders, or that, in giving their statements to the world, they must have been influenced by some other motives than the announcement simply of scientific facts; for one of them asserts, that to work a blast-cylinder, 50 inches diameter, with 6 feet stroke, and making 16 double strokes per minute, the power absorbed from an engine will be 90 horses!!! And the other, that to work a blast-cylinder, 48½ inches diameter, with 6 feet stroke, and making 20 double strokes per minute, the power absorbed will be 54 horses!!! In both cases, the pressure of the air in the blowing-cylinder being from 3½ to 4 lbs. per square inch.

It is very amusing to learn, Mr. Editor, by Mr. James Brown's own statement, the manner in which he arrived at the horse-power. It was thus:—*The steam-cylinders being 36 inches diameter, and the pressure on the boilers 40 lbs. per square inch, the power is 90 horses!*—Will Mr. James Brown be so good as to inform your readers, what the power of an engine will be, when the pressure on the boilers is what he has stated it, and the throttle valve, that admits steam from the boilers to the engine, is shut? May I ask, will the engine have any power at all? As, in such case, the engine has no power; so the power of an engine will be greater, or less, according to the pressure in the boilers, and the extent to which the throttle valve is opened.

I cannot, of course, state whether the pressure on the boilers may not have been 40 lbs. per square inch, at some one time, when Mr. James Btown visited Llanhiddel; but this I do know, that the engineer prefers working the steam to a pressure of 30 lbs., and not 40 lbs., on the boilers; and that he works to a higher pressure than there is occasion for him to do, under an impression (whether he be right or wrong) that, by wire-drawing the steam through a small opening of the throttle-valve, he gains some advantage from expansive action.

Had Mr. James Brown made proper inquiries, he would have learned that both the spray pump and the common pump, used in aid of the sinking, have been worked, for hours together, with a pressure of 15 lbs. per square inch. But, then, the throttle-valve was fully open. Hence, by Mr. James Brown's own method of calculation, the power absorbed from the engine to work both spray pump and common pump was 34 horses, and not 90 horses to work the spray pump only, as he has stated:

$$\text{For } \frac{\text{90-horse power by 15 lbs.}}{\text{40 lbs.}} = \text{34-horse power.}$$

"Cassell Morlais," on the erroneous views he has promulgated on this subject, has already been replied to, by "Fair Play," of Birmingham.†

I will, however, now enter *generally* into a practical exposition of power and effect.

In the iron trade, where blast-cylinders are mostly used, it is customary to make the diameter of the blast twice the diameter of the steam cylinder. Hence, the diameter of the blast cylinder at Llanhiddel, being 50 in., it would, under ordinary circumstances, require to work it a 25-inch steam cylinder; and this latter would be rather more than 21-horse power. The average pressure of the air at the iron-works is 2½ lbs. per square inch. At Llanhiddel, the highest working pressure is 4 lbs.; and the average, about 3½ lbs. To work, therefore, the 50-inch blast cylinder to that pressure, under similar modes of consideration, would require of steam-power 30 horses.

$$\text{For } \frac{\text{21-horse power by 4 lbs}}{\text{2½ lbs.}} = \text{30-horse power.}$$

In corroboration of this, and to prove that the amount of power here given is amply sufficient, it may be necessary for me to remark, that the blast cylinder now at Llanhiddel was worked at 4 lbs. per square inch, with 20 double-strokes, of 6 feet each, per minute, by a 26-inch low-pressure condensing-engine; and that an engine of that size is 26½-horse power.

To leave nothing to conjecture, however, I will now prove that engineers and iron-masters have sound practical reasons for thus proportioning the blast cylinder to the steam cylinder. A blast cylinder, twice the diameter of the steam cylinder, contains four times its area—hence, as the pressure of air on the blast piston is 2½ lbs per square inch, at the iron-works the pressure of steam on the steam piston, to balance it, will be 2½ multiplied by 4 = 11 lbs. Now, a good condensing steam-engine derives 13 lbs. of power from the vacuum of the air-pump, and 6 lbs. from the steam, beyond atmospheric pressure—making, together, 19 lbs. on the steam piston. Hence, there is a surplus amount of power on the steam piston, equal to 8 lbs. per square inch, to overcome the friction, &c., &c., of the engine and blast piston, which, I flatter myself, is amply corroborative of the correctness of the proportions assigned by the engineers and iron-masters, and of the justness of the statements I have made. But I again repeat, that the blast cylinder, 50-in. diameter, now employed at Llanhiddel, was, in Staffordshire, worked by a 28-in. low-pressure condensing engine; that engine had been previously used as an old "whimsey" for winding coal; and, from the small diameter of its steam-pipes, its angles, bends, and contracted passages, it worked, as "Fair Play" has justly remarked, much below the power that a steam cylinder of such size should do.

Having, Sir, thus endeavoured to elucidate the power absorbed from the steam-engine by the blast cylinder at Llanhiddel, I shall, in a similar manner, attack the equally erroneous statements of Mr. James Brown, and "Cassell Morlais," as to the amount of duty performed by the spray pump. HENRY ADCOCK.

** Vide* Mr. James Brown's letter, in the *Mining Journal* of October 9.
† *Vide, Mechanics' Magazine*, No. 1260.

[*To be continued in next week's Mining Journal.*]

NEWLY-INVENTED TRAVELLING CARRIAGE, REQUIRING NEITHER STEAM NOR HORSE-POWER.—There is now exhibiting at the Music-hall, in Bold-street, a newly-invented carriage, constructed to travel on common roads at the rate of 10 miles an hour, the propelling of which is entirely effected by machinery within the body of the carriage itself, neither horse nor steam-power being requisite. It is the invention of Mr. Farries, of Preston, for which he has recently obtained a patent. The vehicle, which as an exceedingly neat appearance, is of the size of an ordinary carriage. The machinery is situated in the front part of the carriage, but being enclosed, is not at all seen when the carriage is in motion, the vehicle moving along as if from no apparent cause. The propelling power is obtained by the working of a cylinder traddle-wheel, which acts in connection with a number of bevel cog-wheels, producing both power and speed at the driver's pleasure. The mode of working the cylinder-wheel resembles that of the treadmill, but the general construction of the machinery renders this part of the labour very light and simple—so much so, indeed, that we learn one person may conduct the propelling of the carriage for a distance of 30 or 40 miles, without incurring fatigue. There are also a number of breaks by which the carriage may be easily stopped, or the pace slackened at pleasure. In the upper part of the machinery there is a kind of rudder, by means of which the carriage is steered or thrown to either side of the road which may be requisite, and any other vehicle may be passed or met with the same ease and facility as with an ordinary carriage drawn by horses. This is effected by what we have described as the rudder, being connected by iron rods with the fore-wheels and axles, by means of which they are turned to the right or left, as required, the carriage at once following in the same direction. The ease with which the carriage is worked may be imagined, when we state that the same person who works the cylindrical wheel can, without any difficulty, also attend to the steerage department. The driver is placed so as to have a full view before him; and the front of the carriage being open for that purpose, he has a clear sight of any approaching vehicles. The axles and wheels are made upon an entirely new principle, the sole invention also of the patentee. In the construction of the machinery, the inventor has had regard to the difficulty of so arranging the propelling power as to meet the obstacles of steep ascents. From the manner in which the carriage works, this point seems to be successfully accomplished. We have minutely inspected the exhibition; and whilst we were present, the carriage ascended an incline of 3 inches in a yard with apparent ease. There is, however, greater difficulty in ascending an incline than in travelling on a level, and the speed is consequently not so great in the former as in the latter case. This singular invention, which we learn has engaged the attention of the patentee for many years, is one of great curiosity, and seems to render it exceedingly probable that, at no distant day, it will be available for practical purposes. Indeed, we cannot see any reason why it should not be so, more especially for cab or omnibus purposes. The model carriage, now exhibiting, will carry 12 persons, and we understand that the machinery is adapted for the construction of different descriptions of vehicles, of either a larger or less size. It has been visited by great numbers of spectators, and will, doubtless, for some time, be an object of great attraction to the curious. We recommend our readers to inspect this interesting aid to locomotion.—*L'pool Standard*

STEAM NAVIGATION ON THE DANUBE.—The first attempts to navigate the Danube by steam were made by some French and German engineers, who were so confident of success, that they did not even try the vessel, but at once invited the Emperor Francis I., to honour them with his presence on their first trip to Pesth; the overtures were agreed to, and the vessel was christened *The Emperor Francis the First*. His Majesty safely embarked, and a most favourable passage was made *down* the stream; on arriving at Pesth, with his Majesty on board, the vessel created no little sensation—salutes were fired from all the batteries, and the curiosity evinced was intense; and, to celebrate the great event, public balls and other festivities were given. At the end of all the joyous proceedings, his Majesty intimated his intention of returning to Vienna, and was again received with all pomp and splendour. When orders were given to "go on with all speed," to the astonishment of all it was found the engines had no power, that the stream was carrying the boat down the river, all attempts to propel the boat against the stream proved ineffectual, and his imperial majesty was obliged to land, and proceed to Vienna through a country where the roads were so bad, that the carriage frequently stuck fast in the mud. The parties from this defeat were induced to believe, that to navigate the Danube by steam-vessels was impossible, and this opinion was corroborated by the "eminent engineers" of Vienna. In 1830, Mr. J. Pritchard, a Woolwich Dockyard shipwright, arrived in Vienna, with a companion, named Andrews, as interpreter, who, after examining the currents of the Danube, announced to Baron Patton, an influential banker in Vienna, that he saw no difficulty in effecting the desirable object. This enlightened nobleman, knowing the importance to his country which must arise, by carrying out such an undertaking, at once opened his bank, supplied Mr. Pritchard with the requisite capital for a second attempt, providing, also, a suitable situation where to build the vessel, and orders were given to Boulton and Watt for the engines, which are at present working as well as they did on their arrival first in Austria. The learned Viennese continually asserted that the second attempt would be only money thrown away, and not unfrequently was Mr. Pritchard taunted while at his work; with persevering energy, however, he completed his ship, the engines having arrived from England were properly fitted; and, all being ready, Mr. Pritchard took the command, accompanied by his supporters only; those who had been previously defeated in their attempt were content to remain on shore, expecting to have a hearty laugh at the Englishmen. Mr. Pritchard, however, brought his charge into the rapids near Floridsdorf, and, to the utter astonishment of the *savans*, cleared them in gallant style, with the Austrian flag at the bows, and the union jack at the stern, the Englishmen on board singing "God save the King." After several hours' cruise about the river, they anchored for the night; and the same evolutions were repeated the next day with equal success, several of the most distinguished families of Vienna being on board, and thousands of spectators on shore. Overtures were again made to the emperor to visit Pesth in the new steamer; his Majesty signified, that the vessel must first visit Pesth, and, on its return, he would consider the subject. The voyage was undertaken—the vessel remained in Pesth several days; and, when the inhabitants found that her success was complete, their enthusiasm was greater than before, the Palatine of Hungary and family making several excursions while the ship remained. Mr. Pritchard returned to Vienna, where he was equally well received; the ship was visited by the Imperial family, and permission given to name her *The Francis the First*. After several weeks' excursions about Vienna, it was advertised to run three times a week from Vienna to Pesth, thus opening up the first permanent steam communication between the two places. A concession was then granted by the Austrian Government to Mr. Pritchard for the exclusive right of carrying on steam navigation on the Danube for 15 years. A company was then formed; but, from some mismanagement on the part of Pritchard and Andrews, the company got hold of the concession, Andrews contrived to obtain about 6000*l.*, while Pritchard, the successful practical man, resides near Fiume, nearly destitute. Since 1830, the number of steam-boats has increased to a great extent on the Danube, there being now 24 plying between Lintz and Drenkova, the remainder of the journey to Constantinople being performed in the Austrian "Lloyd's" steam-vessels.

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From Sir PHILIP CRAMPTON, Bart., Surgeon-General to the Army in Ireland:—"DEAR SIR,—There can be no doubt that magnesia may be administered more safely in the form of a concentrated solution than in substance; for this, and many other reasons, I am of opinion that the fluid magnesia is a *very valuable* addition to our Materia Medica.—PHILIP CRAMPTON."—Sir J. Clarke, Sir A. Cooper, Dr. Bright, and Messrs. Guthrie, and Herbert Mayo, of London, strongly recommend Murray's Fluid Magnesia, as being infinitely more safe and convenient than the solid, and free from the danger attending the constant use of *soda or potass*.

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Letter from J. Murray, Esq., Lecturer on Chemistry, F.S.A., F.L.S.:—"DEAR SIR JAMES,—Many years have elapsed since you first showed me, in your laboratories, your super-carbonate, or soluble magnesia, and demonstrated experimentally the remarkable quantity of pure magnesia held in transparent solution. It was then new to me, as it was to the chemical world, and I speak advisedly, as a practical chemist. I believe its medical value cannot be too highly estimated; and I am satisfied that the public is under an infinite debt of gratitude to you for those invaluable researches, which have been the means of its introduction. Not to mention its more obvious healing virtues, I believe it to be almost, if not altogether, a specific for lithic acid concretions, when used in the pure condensed solution invented by you.

'Believe me to be your's, faithfully, JOHN MURRAY, F.S.A.

"To Sir James Murray, Dublin. Portland-place, Hull, Aug. 30, 1839."

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"To Sir J. Murray. Tuthill's Hotel, Dawson-street, Dublin, Feb. 19, 1839."

From Dr. KENNEDY, Master of the Lying-in Hospital, Dublin:—"DEAR SIR,—I consider the fluid magnesia to be a *very valuable* and *convenient* remedy in cases of irritation or acidity of the stomach, but more particularly during pregnancy, febrile complaints, infantile diseases, or sea sickness."

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Sold by Sutton and Co., 10, Bow Churchyard; W. Edwards, 67, St. Paul's Churchyard; Barclay and Sons, Farringdon-street; Butler, 4, Cheapside; R. Johnston, 63, Cornhill; L. Hill, New Cross; W. B. Jones, chemist, Kingston; J. W. Tanner, Egham; S. Smith, Windsor; J. B. Shillock, Bromley; T. Riches, London-street, Greenwich; T. Parkes, Woolwich; Eds and Co., Dorking; and John Thurlby, High street, Romford—of whom may be had the *Silent Friend*.

A LILLIPUTIAN ENGINE.

On Saturday, availing ourselves of an invitation from the directors of the Eastern Counties Railway, we proceeded to the Bishopsgate terminus, in order to view, and take a trip by, a new engine and carriage, constructed from designs by Mr. Samuel, the resident engineer. On proceeding to one of the sidings, beyond the platform, we were not a little surprised to find what appeared in size to be an engine little beyond that of a model, as compared with its more ponderous neighbours, a Lilliputian among Brobdignags, with a boy of 15 years old, selected for his intelligence and knowlege of engines—having made three working models himself—as assistant engineer and stoker, quite in unison, therefore, with the dwarf-like machine. The dimensions of the vehicle to which we were about to commit ourselves may be thus stated. The entire length of frame of engine and carriage, which is one, 12 ft. 6 in., on four wheels, 3 ft. 8 in. in diameter, the leading and driving wheels being of equal size; and the width from centre to centre 9 ft., the wheels being outside all. The frame is divided in the middle by a bulkhead, about 5 ft. high, into two compartments, the foremost containing the engine and machinery, and the latter the seats for the passengers. The boiler is a vertical one, on the American principle, consisting of 34 tubes, 1¼ in. in diameter, its diameter being 2 ft., and height 3 ft. 6 in. The flue beneath is 1 ft. from the rails, level with the floor, and the entire height of flue, boiler, and chimney, 7 ft. 6 in. The machinery, the working parts of which are all composed of steel, is enclosed in boxes on the sides of the compartment, consisting of two inside cylinders, 3 in. in diameter, with a 6-in. stroke, crank axle, link motion, with the usual reversing gear. The water tank is in the cross seat, against the division board of the two compartments, and will hold a sufficient supply for a run of from 18 to 20 miles. Coal is used in consequence of its being so much easier of combustion than coke in a furnace of such small dimensions. The passenger compartment is open, and resembles what is termed an inside Irish car, having a seat crosswise against the division board, and one on either side, which, together, will conveniently accommodate seven persons. The weight of the whole, which is suspended on spiral bearing springs, when in working order, exclusive of passengers, is about 22 cwts., and is able to travel at the rate of 40 miles an hour, the boiler having borne with ease a pressure of 200 to the square inch, but it is not intended to drive her at this rate of pressure on ordinary occasions. At half-past 12, Mr. Samuel took his place at the engine, the invited their seats, and away we went with an ease and facility perfectly astonishing, oscillation being scarcely discernible, passing the points and crossings as though we were on a continuous straight line of rails. We arrived at the Cambridge station at a quarter to 3 o'clock—three stoppages were purposely made in the progress, for water and other purposes, which occupied nearly half an hour—so that the journey of 57½ miles may fairly be said to have been accomplished in 1¾ hour, in more than one instance during which the speed attained was at the rate of 43 miles an hour. Mr. Samuel's object in constructing this engine has been to produce a useful piece of locomotive machinery upon a limited scale, for particular purposes, in doing which he had done away with what he considers all useless and unnecessary weight; has brought the gravity as low down, and as near the rails as possible, so as to ensure safety; and thus obtain a useful working engine and accommodation to the extent stated, at somewhere about one-fourth of the cost of putting on, in an emergency, a "pilot" or "express" engine of present size and construction. Such is the comparative charge, at any rate, at which the use of this means of transit has been offered to convey news or newspapers on important and extraordinary occasions, when it may be considered advisable to send it or them down their lines out of the usual course. Mr. Samuel states most confidently, that with some alterations, additions, and trifling enlargements, he shall be enabled to drive an engine and carriage of this description 90 miles within the hour.—*Daily News.*

NEW MODE OF MAKING ARTIFICIAL MAGNETS.

As magnetism is now applied to many purposes of practical utility, as well as in many instructive and amusing experiments, and as artificial magnets can easily be made of greater power than loadstones, I presume it will be acceptable to many of your readers to know how artificial magnets may be made without any risk of failure. Makers of magnets and compass-needles know that, if the most careful and skilful workman be employed in preparing a number of magnets from the same steel bar, the magnetic power of the magnets, when compared with each other, will greatly vary; although every possible care may be taken in forging, tempering, and magnetising, in an uniform way. Experience in these matters convinced me that discrepancies in the magnetic powers of magnets of the same length, weight, and quality of steel, arise from the *tempering alone*; for if the metal be heated in a furnace, or coal fire, one part of the bar may be in contact with glowing coal, another part in flame, a third in heated air, a fourth in contact with coal in a state of ignition, &c.; consequently, the metal is not in all its parts raised to the *same* temperature, when suddenly removed from the fire and plunged into a cooling fluid. The relation between the degrees of heat in the heating and cooling mediums is absolutely unknown; magnets tempered in this uncertain way will possess different degrees of hardness throughout their length, and their capacity for magnetism in all their particles will be unequal and uncertain. Reasoning in this way, it appeared to me, that in order to make compass-needles and steel magnets successfully, we require *specific heats* in the *warming* as well as in the *cooling* process of tempering, in order to ensure the same degree of hardness throughout the steel bars—that is to say, that the metal when cold should be a homogeneous mass, and possess a uniform capacity for the reception and retention of the magnetic virtue. Metallurgists know that lead melts at a low temperature, but if left on a good fire, it gets first a red, and then a white heat; that continuing to absord caloric, it ultimately *boils* at a uniform heat, which melts gold or silver, as is evident in the process of "cupelation." Now here we have a *specific* heat at probably 500°, and we have also a specific heat of boiling water at 212°. *It, therefore, struck me, that by heating my needles* in boiling lead, and cooling them in boiling water, every particle of the steel would be first raised to, and then cooled down to, the same temperature and degree of hardness. The experiments have been made with complete success, and more powerful magnets have been made in this way than were ever made before, *without risk of failure.* Magnets weighing 600 grains, and 6 inches in length, have held in suspension 14 times their own weight; and compass-needles have given by deflection 30°, at twice their length, from a test-needle. I find that magnets tempered in this way are not liable to break, but possess with great hardness a *toughness,* derived probably from the boiling water. Their power of retaining the magnetic energy has *for four years* remained unimpaired, although left without "keepers." To manufacturers of magnets, and makers of compass-needles, a knowledge of this mode of tempering steel, at a specific temperature of the heating and cooling mediums, will enable them to make articles of a superior quality without risk of failure, or needless expense; and as I have no other object in view than the advancement of useful knowledge, I now send you these remarks for publication. In heating the steel, the bars require to be pressed under the surface of the boiling lead (as the steel would otherwise float on its surface), and the magnet should be suddenly shifted from the lead to the boiling water, the instant it has acquired the temperature of the boiling lead; for to leave it longer in the lead would spoil the smooth surface of the steel, and render it as rough as if heated in a furnace or common fire. W. WALKER, Q. H. Master.

Plymouth, Oct. 12.—Mechanics' Magazine.

THE ATMOSPHERIC RAILWAY SYSTEM.—This system of traction is now in constant operation, on the 15¼ miles of railway, between Exeter and Teignmouth. There are every day (Sundays excepted) propelled by this process, four passenger trains up, and three passenger trains down, a heavy goods train, and the whole is accomplished with the greatest regularity. The speed, which is admirably under control, averages upwards of 30 miles an hour; the stoppages at the St. Thomas, Starcross, and Dowlish stations, are so managed, that the trains are brought to a stand still with the greatest ease and precision—in fact, as easily as those propelled by the locomotive engine: the starting from the respective stations is also conducted in a very ingenious, though simple, manner—atmospherically, by the assistance of an auxiliary tube. The train, on the usual signal—the guard's whistle—being given, gently runs on to the mouth of the continuous tube, a short distance from the platform, and immediately as the piston enters, the full force of the atmospheric pressure is felt—the speed is increased, and the train rattles along with wonderful rapidity, which can at all times be checked and regulated by the engineer, by the application of an exceedingly powerful break, which he can apply instantly and simultaneously to the six wheels of the carriage. In the course of a fortnight, the first atmospheric train will run to Newton—a distance of 20½ miles from Exeter; and in a short time, we learn, the locomotive engines will be entirely removed from that portion of the railway. The tubing is also being laid towards Totness, the pipes being 22 inches in diameter, as the gradients between that town and Newton are very stiff: about a mile is nearly perfected, and a double line is constructing. The engine-houses are also rapidly progressing. —*West of England Conservative.*

AMBERGATE, NOTTINGHAM, BOSTON, AND EASTERN JUNCTION RAILWAY.—An offer having been made for the lease of this line by the Great Northern Company, and the directors having stated, in an advertisement calling a meeting for the 5th proximo, to consider the proposition, that they could not recommend its adoption, a meeting of the London shareholders was held at the London Tavern, on Wednesday—Mr. MITCHELL in the chair—when resolutions were carried, to the effect, that it is legitimate and desirable to reduce the magnitude of the undertaking within the limits prescribed by the financial capabilities of the present proprietary, and by the actual requirements of the district for railway accommodation; that it is far preferable to accept an alliance with the Great Northern Company, on the principle of an expenditure reduced by three-fifths; to abandon a heavy and needless section; to secure a guaranteed minimum dividend; and the option of great prospective advantages—than to remain committed to much larger responsibilities with returns altogether unsecured; and that the shareholders be requested to support personally, or by proxy, an alliance with the Great Northern Company, in the absence of any more eligible offers from other companies.

CHEMICAL THEORY OF SWEDENBORG.—Unlike the chemists of our day, he made no doubt that chemistry in its inmost bosom was amenable to the laws of mechanics, and that there was nothing necessarily mysterious in it, nothing occult, nothing but a peculiar portion of the ubiquitous clock-work of space and time. His theory was this—that roundness is the form adapted to motion; that the particles of fluids, and specifically of water, are round, hollow spherules, with a subtle matter, identical with ether or caloric, in their interiors and interstices; that the crust, or crustal portion, of each particle, is itself formed of lesser particles, and these again of lesser, and so forth; water being in this way the sixth dimension, or the result of the sixth grouping of the particles; that the interstices of the fluids furnish the original mould of the solids; and the rows of the crustal particles, forced off one by one by various agencies, furnish the matter of the same; that after solid particles are thus cast in their appropriate moulds, their fracture, aggregation, the filling in of their pores and interstices by lesser particles, and a number of other and accidental conditions, provide the units of the multiform substances of which the mineral kingdom is composed. According to this theory, then, there is but one substance in the world—viz.: the first—the difference of things is difference of form; there are no positive, but only relative atoms; no metaphysical, but only real elements; moreover, the heights of chemical doctrine can be scaled by rational induction alone, planted on the basis of analysis, synthesis, and observation. The Newton of chemistry has not yet arisen, but when he does appear, who but Swedenborg shall be recognised as its Copernicus?—*Recent Popular Sketch.*

SWANSEA DOCK COMPANY.—At an Extraordinary

General Meeting of the Shareholders, held at the Guildhall Coffee-house, Kingstreet, Cheapside, London, upon Wednesday, the 20th day of October, 1847,

LIEUTENANT-COLONEL CAMERON (deputy chairman of the company), in the chair,

Mr. Howden, the assistant secretary, read the advertisement calling the meeting, and the report of the committee of shareholders, also the bye-laws and regulations referredf to in the advertisement. The following resolutions were thereafter severally proposed and carried,—viz.:

1. That this meeting, having heard the report of the committee named at the meeting o shareholders held on the 31st of August last read, together with the statements made to the meeting this day, are of opinion that that part of the recommendation of the said committee, by which they recommend that the number of directors of the company should be reduced from 17 to 9, ought to be adopted, and, in pursuance of the provisions of the special Act incorporating the company, resolve that the number of directors be reduced from 17 to 9, and hereby reduce the said number accordingly.

2. That the very irregular and illegal proceedings of the directors at Swansea, as recorded in the minutes of their proceedings this day read, and in particular in passing certain bye-laws and regulations on the 19th of August last, are such as to destroy the confidence of the London shareholders (who hold more than one-half of the stock of the company), in the fitness and ability of the directors resident at Swansea to conduct with advantage the business of the company, and this meeting are satisfied that such business cannot, with safety to the interests of the shareholders, be any longer confided to their management.

3. That in pursuance of the powers conferred on them by the Act of Parliament incorporating the company, this meeting hereby resolve—That the business of the company shall in future be conducted by nine directors, the same to be composed of the following gentlemen:—

Lieutenant-Colonel Cameron,	W. B. J. P. Cameron, Esq.,
Jacob Montefiore, Esq.,	Captain E. N. Norcott, R.N.,
N. P. Cameron, Esq.,	Captain A. H. Erle, R.A.,
Captain J. Price, R.N.,	L. L. Dillwyn, Esq.,
	G. B. Morris, Esq.,

who alone shall have the usual and full powers conferred by the Act of Parliament to manage the business of the company as directors thereof, from and after this date; the other directors who have hitherto acted as their coadjutors, being hereby discharged from all further exercise of such power, and any interference as directors with the management of the affairs and business of the company. This meeting do also hereby determine that the order of rotation for the directors going out of office shall be arranged between themselves, and failing such arrangement, then by ballot in the usual form.

4. That the several bye-laws and regulations passed by the directors at Swansea, on the 19th August last, are most irregular and highly objectionable, and this meeting wholly condemn the conduct of the directors at Swansea, in passing the same, and this meeting hereby repeal and rescind the same accordingly.

5. That this meeting being satisfied that the business of this company can only be properly conducted in London, recommend the directors hereby confirmed as such, to make all proper arrangements without delay, for the future management of the business of the company in London.

6. That these resolutions be advertised in the London and Swansea newspapers, and a copy thereof distributed among all the shareholders. N. CAMERON, Chairman.

On the motion of Mr. West, seconded by Mr. Barham, and carried unanimously, the thanks of the meeting were voted to the chairman, for his urbanity and able and impartial conduct in the chair.

SWANSEA DOCK COMPANY.—An Extraordinary General

Meeting of the Shareholders of this Company was held, pursuant to public notice duly given, at the company's offices, Quay-parade, Swansea, on Thursday, the 21st day of October, 1847, at 12 o'clock at noon, and thence, for convenience, adjourned to the Castle Hotel, in the said town, on the same day—present,

CAPTAIN EVAN MORGAN, R.A. (the chairman of the company), in the chair.

Messrs. C. R. Jones	Messrs. Wm. H. Francis
,, John Richardson	,, John W. Leach
,, L. L. Dillwyn	,, J. Williams, *Cambrian* Office
,, Thomas Walters	,, Geo. Huxham
,, David Francis	,, H. W. Jones
,, Geo. Byng Morris	,, M. Moses
,, John Crow Richardson	,, R. Richards, jun.
,, John Jenkins	,, Wm. Jenkins, jun.
,, M. Moggridge	,, C. Hutchinson
,, W. M. Maxwell	,, Eli James
,, James James	,, John Davies
,, Wm. Walters	,, Geo. G. Francis
,, C. T. Wilson	,, John Oakshot
,, John T. Jenkin	&c. &c.

The chairman having taken his seat, the Secretary stated that he had received proxies from the following absent shareholders for this meeting:—

George Nicholls, Esq., London	James Richardson, Esq., London
Sir John Pirie, Bart., ditto	Mr. F. B. Sanguinetti, London, and
Albert Jenkin, Esq., ditto	Robert Eaton, Esq., Bryn-y-Mor.

The Secretary, having laid the sealed register of the company on the table, was requested to read the advertisement in the *Cambrian* of the 1st of Oct., 1847, convening this meeting.

The report of the committee of shareholders, appointed by the general meeting of the 31st of August, was read, as follows:—

SWANSEA DOCK COMPANY.

COMMITTEE APPOINTED BY SHAREHOLDERS.

Guildhall Coffee-house, London, September 20, 1847.

Rev. James Sherman	Edw. M. Elderton, Esq., solicitor
George Nicholls, Esq.	Geo. G. Francis, secretary
John Trev. Jenkin, Esq., solicitor	A. C. Howden, assistant secretary.

The resolution of the general meeting of shareholders, held on the 31st of August last, appointing this committee, was read by the Secretary.

The solicitors and secretaries having stated the various points in connection with the subjects for which the committee was called together, and the several circumstances which occurred during the progress of the company's bill in Parliament, and the proceedings of the directors having been detailed and explained, it was resolved—

That this meeting should adjourn till to-morrow, at half-past 10 A.M., to further deliberate and decide on their report.

ADJOURNED MEETING—21st September, 1847.

Rev. James Sherman, chair	Edw. M. Elderton, Esq.
George Nicholls, Esq.	Geo. G. Francis, Esq.
John Trev. Jenkin, Esq.	A. C. Howden, Esq.

Yesterday's proceedings, and the resolutions appointing this committee were read.

The subject and object for which the committee were appointed having been again fully discussed,

It was moved by G. Nicholls, Esq., and seconded by J. T. Jenkin, Esq., and resolved; That the following report be adopted, and presented to the shareholders:—

To the shareholders of the Swansea Dock Company.

GENTLEMEN,—We, the undersigned members of the committee appointed by a resolution passed at your first general meeting, held on the 31st of August last, having met, and fully considered the subject referred to them, beg to report—

1. That we recommend that the number of directors should be reduced to nine.

2. That a specific sum be placed at the disposal of the London directors, as a consideration for their past services and disbursements.

Lastly. We recommend that the business of this company be in future transacted by the said board of nine directors at Swansea, and that the London officers and offices be forthwith discontinued. (Signed) JAMES SHERMAN, Chairman.
GEORGE NICHOLLS.
J. TREV. JENKIN.
GEO. GRANT FRANCIS.

DISSENTIENT.

Mr. Howden, for himself, and expressing, as he believes, the views and opinions of a majority of the shareholders in London, dissented, stating—That, as by the last proposition, the mode of management proposed is so different from the arrangements originally made between the Swansea and London shareholders, and on the faith of which the London shareholders subscribed their shares, that those shareholders should be offered to have their deposits returned to them, free of all charge, before any such change of exclusive management can be justly or legally sanctioned or acted upon.
(Signed) A. C. HOWDEN.

Mr. Elderton, one of the solicitors of the company, and a member of this committee, also dissents from the last recommendation, as being, in his opinion, inequitable towards the London shareholders. (Signed) EDWARD M. ELDERTON.

NOTE.—Neither Mr. Howden or Mr. Elderton are shareholders in the Swansea Dock Company.

It was moved by Mr. C. T. Wilson, seconded by Mr. M. Moses, and unanimously resolved; That the report of the committee appointed by the shareholders at their first general meeting, held in London on the 31st of August last, be received and entered in the minute book.

It was moved by Mr. Matthew Moggridge, seconded by Mr. W. M. Maxwell, and unanimously resolved;

That the number of directors of this company be reduced to nine, such reduction to take effect immediately after this meeting.

It was moved by Mr. James James, seconded by Mr. W. H. Francis, and unanimously resolved;

That Messrs. Nathaniel Cameron, Alexander Hamilton Earle, Nathaniel Price Cameron, William Booth, Joseph Price Cameron, Edmund Nash Norcott, Samuel Price, and Thos. Walters, be discontinued as directors of this company, in consequence of the reduction of the number of directors to nine, and that they cease to be directors immediately after the present meeting.

The Swansea directors having at this meeting declined to take any remuneration for their services out of the capital of this company.

It was moved by Mr. Moggridge, seconded by Mr. J. Jenkins, and unanimously resolved; That it is not expedient at present to enter on the consideration of remuneration to the London directors who have been this day discontinued.

It was moved by Mr. Charles Thomas Wilson, seconded by Mr. Charles Hutchinson, and unanimously resolved;

That the London solicitor, Mr. Edward Merrick Elderton, be no longer employed as one of the solicitors of this company, and that he be requested to deliver his account forthwith to the directors.

It was moved by Mr. John Crow Richardson, seconded by Mr. John Davies and unanimously resolved;

That the assistant-secretary, Mr. A. C. Howden, be forthwith dismissed from the service of this company, and that the directors do exercise their discretion as to the discontinuance of the London offices, and as to providing any other place or places for the meetings of the directors in London, or for the transaction of such of this company's business as it may be necessary to transact there.

It was moved by Mr. John Williams, seconded by Mr. John W. Leach, and unanimously resolved;

That the best thanks of this meeting be given to the shareholders of this company who acted on the committee in London on the 20th and 21st of September last.

It was moved by Mr. William Walters, seconded by Mr. C. T. Wilson, and unanimously resolved;

That the thanks of the shareholders be given to the gentlemen, now ceasing to be directors, for their past services.

It was moved by Mr. James James, seconded by Mr. M. Moses, and unanimously resolved; That the proceedings of this meeting be advertised twice in the *Times* and *Mining Journal*, and two Swansea papers, and that copies thereof be delivered to the directors, solicitor, and assistant-secretary, who have this day been discontinued. The question as to the order of rotation in which the reduced number of directors shall go out of office having been discussed, it was not considered necessary to pass any resolution on that subject for the present. (Signed) EVAN MORGAN, Chairman.

The chairman having left the chair, it was moved by Mr. George Huxham, seconded by Mr. Lewis Llewellyn Dillwyn, and unanimously resolved;

That the best thanks of this meeting be given to Captain Evan Morgan, R.A., the chairman of this company, for his conduct therein.

Swansea, October 21, 1847. (Signed) G. GRANT FRANCIS, Secretary.

IMPORTANT TO RAILWAY AND STEAM NAVIGATION COMPANIES, MANUFACTURERS, AND ENGINEERS.

W. BROTHERTON AND CO.'S

PATENT LUBRICATING FLUID (or Animal Oil) FOR ALL DESCRIPTIONS OF MACHINERY.

W. B. & CO. have the pleasure to state, that the above article is extensively used in her Majesty's Steam Navy, and by several of the principal Steam Navigation and Railway Companies, and is pronounced by them, and by the first practical engineers of the day, to be far better adapted for the purposes of lubrication than any other article hitherto used for such purposes. The Patent Lubricating Fluid is equally applicable for the most intricate and fine pieces of machinery, as for the heaviest bearings of the steam-engine. It is cheaper, much more economical, and cleaner than oils at present in use; is free from smell, and calculated to effect a vast saving in the expenditure of working steam powers.

Further particulars can be had, and testimonials seen, by application to the manufacturers, W. BROTHERTON & CO., Hungerford Wharf, Strand, London.

N.B.—The above article will burn in lamps, and give a light equal to the best sperm oil.

BY HER MAJESTY'S LETTERS PATENT.

FULLER AND DE BERGUE'S VULCANIZED INDIA-RUBBER BUFFERS and BEARING SPRINGS FOR RAILWAY CARRIAGES.

The PATENTEES of this NEW and IMPORTANT INVENTION beg to announce to Engineers, Carriage-builders, and Railway Companies (especially those constructing new lines), that they have now completed their arrangements for SUPPLYING the VULCANIZED INDIA-RUBBER BUFFERS and DRAW-SPRINGS, for Passenger-Carriages, Waggons, Cattle-Carriages, Engines, Tenders, &c., and are prepared to execute Orders TO ANY EXTENT.

On several of the principal Lines these Buffers have now been tried for many months past, under very able superintendence, and with decided success. The patentees, therefore, feel justified in stating, that they are prepared to furnish not only a more efficient Buffer than any hitherto in use, but on terms which will effect a considerable saving to Companies in the first outlay.

Specimens of the various kinds of buffers and draw-springs may be seen, and prices obtained, on application at their offices, No. 9, Arthur-street West, London-bridge, or at their depôt, No. 2, David-street, Manchester.

The patentees will also be happy to furnish full information to all communications by letter, together with drawings of the best mode of application.—The attention of Locomotive Engineers is particularly invited to their BEARING SPRINGS for ENGINES and TENDERS, the recent trials of which have proved most successful.

FLEXIBLE HOSE-PIPES FOR LOCOMOTIVE ENGINES, RAILWAY CRANES, FIRE-ENGINES, GAS, &c.

PATENT VULCANISED INDIA-RUBBER HOSE-PIPES AND TUBING OF EVERY DESCRIPTION.

These pipes are made to stand hot-water without injury—are very superior to leather pipes, or the common India-rubber pipes; and, as they do *not* become hard or stiff in the lowest temperatures, or require any application when out of use, are particularly well adapted for fire-engines.

FLEXIBLE TUBING, of every description, for gas, chemical purposes, &c.

VULCANISED INDIA-RUBBER WASHERS, all sizes, for steam and hot-water joints, &c.—Sole manufacturer, JAMES LYNE HANCOCK,

Goswell Mews, Goswell-road, London.

TO ENGINEERS, RAILWAY AND STEAM-BOAT COMPANIES, AND THE OWNERS OF STEAM-ENGINES IN GENERAL.

W. & C. MATHER beg to call the attention of the above parties to their

PATENT ELASTIC METALLIC PISTON.

From the great satisfaction it has already given, they can, with confidence, recommend it. The following are some of its excellent properties:—

1. The great, equable, and mild elasticity: its being perfectly cylindrical and self-adjusting—thereby enabling it to yield, with the least possible friction, to any inaccuracies of the cylinder, whether oval or taper.

2. Its extreme simplicity and lightness—the packing consisting of ONLY TWO PIECES OF METAL, having vertical and horizontal elasticity in due and proper proportion, independent of each other—the horizontal elasticity being also independent of SCREWING DOWN THE JUNK RING OR COVER.

3. It takes the least possible space; and is, therefore, well adapted for air and water pumps.

The above patent was unsuccessfully opposed by Mr. Goodfellow, the patentee of a piston, having *three angular rings,* of a bevil form.

The Solicitor-General conceived that there was not the slightest similarity between them, as may be seen from the subjoined letter from Mr. Carpmael, through whom the patent was taken.

W. and C. M. can refer to upwards of 100, made since the date of the patent (April, 1846), each of which is giving entire satisfaction. They beg to call attention to the fact, that, in a number of cases, they have replaced those made of *three annular rings of the bevil form,* a description of which appeared in the *Mining Journal* of Saturday, October 2, 1847.

[LETTER REFERRED TO.] *April 2, 1846.*

DEAR SIRS,—Mr. Solicitor-General took the hearing in your patent yesterday, at the Privy Council, and decided that the invention did not *interfere*; we are, therefore proceeding with the patent. We are, your obedient servants,

Messrs. Mather. POOLE & CARPMAEL.

The object of publishing the above letter, is to convince parties wishing to use W. and C. Mather's piston, that they have nothing to fear from the caution which accompanied the advertisement referred to, or the unfounded reports which are industriously circulated from the same quarter.

Locomotive and other pistons guaranteed for *twelve months.*

Salford Iron Works, Manchester, Sept., 1847.

TO ENGINEERS AND BOILER-MAKERS.

LAP-WELDED IRON TUBES, FOR MARINE AND LOCOMOTIVE STEAM-BOILERS, TUBES FOR STEAM, GAS, AND OTHER PURPOSES, *ALL SORTS OF GAS FITTINGS.*

THE BIRMINGHAM PATENT IRON TUBE COMPANY,

42, CAMBRIDGE-STREET, BIRMINGHAM, & SMETHWICK, STAFFORDSHIRE, MANUFACTURE BOILER and GAS TUBES, under an exclusive License from Mr. R. Prosser, the patentee. These tubes are very extensively used in the boilers of marine and locomotive steam-engines in England and on the Continent—are stronger, lighter, cheaper, and more durable than brass or copper tubes, and warranted not to open in the weld.

42, CAMBRIDGE-STREET, CRESCENT, BIRMINGHAM.

WORKS—SMETHWICK, STAFFORDSHIRE.

LONDON WAREHOUSE—No. 68, UPPER THAMES-STREET.

THE PATENT OFFICE AND DESIGNS REGISTRY

No. 210, STRAND, LONDON.

INVENTORS will receive (gratis), on application, the OFFICIAL CIRCULAR OF INFORMATION, detailing the eligible course for PROTECTION of INVENTIONS and DESIGNS, with Reduced Scale of Fees.

Messrs. F. W. CAMPIN and CO. offer their services, and the benefit of many years' experience, in SECURING PATENTS and REGISTRATIONS OF DESIGNS, with due regard to VALIDITY, economy, and dispatch—assisted by scientific men of repute.

Also, in MECHANICAL and ENGINEERING DRAWINGS, whether connected with Patents, Railways, or otherwise, by a staff of first-rate draftsmen.

Application personally, or by letter, to F. W. Campin and Co., No. 210, Strand (corner of Essex-street).

NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY,

26, *CORNHILL, LONDON.*

Capital £500,000.—Empowered by Act of Parliament.

This institution embraces important and substantial advantages with respect to Life Assurances and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessity.

Assurances for terms of years are granted on the lowest possible rates.

DIVISION OF PROFITS.

The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 35 to 85 per cent. on the premiums paid on each policy effected on the profit scale.

EXAMPLES.

Age	Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Assured may Borrow.
60	£1000	£20 3 4	1837	£217 15 1	£109 0 11	£16 0 4	£445 0 0
			1838	192 3 0	87 1 4	13 10 2	395 11 1
			1839	165 11 10	74 1 9	11 3 1	346 2 3
			1840	115 7 6	54 0 10	7 18 10	296 13 4
			1841	111 6 8	49 10 0	7 10 4	247 4 6

The division of profits is annual, and the next will be made in December of the present year. F. FERGUSON CAMROUX, Secretary.

MARKWICK'S PATENT CHEST PROTECTORS.—This

season a TRAVELLING CHEST PROTECTOR, to wear over the shirt, will be introduced; and, as it must meet with general patronage, the attention of hosiers and hatters is called to these valuable articles: they are also well adapted for ladies' wear, under a shawl, during damp or piercing cold weather.—MARKWICK'S IMPERMEABLE PELINE is invaluable in cases of gout, rheumatism, tic doloureux, sore throat cold, and also dry hot feet and hands, &c. Socks, gloves, knee caps, head caps, throat protectors, &c., are made from this material, from which any other article may be had, according to the order of the medical or surgical adviser.—Mr. ALFRED MARKWICK'S NEW WORK "ON THE SKIN," just published by the Patent Epithem Company, price 2s. 6d., may be had of all respectable chemists in every town in England.

32, KING WILLIAM-STREET, CITY.

London:—Printed and Published, weekly, by HENRY ENGLISH, at the Office, No. 26, FLEET-STREET, in the city of London, where all Communications and Advertisements are requested to be forwarded—addressed to "the Editor"—post-paid. *October 30, 1847.*

*** It will at all times save much delay and inconvenience, if communications are directed simply TO THE EDITOR, *Mining Journal Office,* 26, FLEET-STREET, LONDON.

And POST-OFFICE ORDERS, &c., must be made payable to WILLIAM SALMON MANSELL, as acting for the proprietors.